



INNOVATIVE DESIGN. CLASSIC RESULTS.

**STORMWATER MANAGEMENT PLAN
FOR
RETREAT AT TIMBERRIDGE FILING NO. 1**

SF-19-009

Prepared for:
TIMBERRIDGE DEVELOPMENT GROUP, LLC
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Prepared by:
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Add space for Contractor
information

Job no. 1185.00

SWMP Administrator:
Change all "SWMP Administrator" to
"Qualified Stormwater Manager"



STORMWATER MANAGEMENT PLAN FOR RETREAT AT TIMBERRIDGE FILING NO. 1

COLORADO DISCHARGE PERMIT SYSTEM STATEMENT (CDPS)/ EROSION AND STORMWATER QUALITY CONTROL PLAN (ESQCP)

Site Inspector

The following Erosion and Stormwater Quality Control Plan (ESQCP) is a detailed account of the requirements of the City of Colorado Springs El Paso County Drainage Criteria Manual, Volume 2 – Stormwater Quality Policies, Procedures and Best Management Practices as amended by the ECM. The main objective of this plan is to help mitigate the increased soil erosion and subsequent deposition of sediment off-site and other potential stormwater quality impacts during the period of construction from start of earth disturbance until final landscaping and other potential permanent stormwater quality measures are effectively in place.

This document must be kept at the construction site at all times and be made available to the public and any representative of the Colorado Department of Health - Water Quality Control Division, if requested.

This report is also proposed to meet all requirements of the Colorado Discharge Permit System for Construction Activity. If any discrepancies between this report and Volume 2 exist, the City/County Manual will prevail.



STORMWATER MANAGEMENT PLAN FOR RETREAT AT TIMBERRIDGE FILING NO. 1

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APPENDIX

VICINITY MAP

COPY OF GENERAL PERMIT APPLICATION

CONTRACTOR SEQUENCE OF ACTIVITIES

OPERATION & MAINTENANCE INSPECTION RECORD

STANDARD BMP DETAILS W/ INSTALLATION & MAINTENANCE REQUIREMENTS

missing appendicies

SITE DESCRIPTION

Retreat at TimberRidge Filing No. 1 has a total acreage of 72.42 acres located in Sections 27 & 28, Township 12 South, Range 65 West of the Sixth Principal Meridian in the County of El Paso, and State of Colorado. This site is bounded on the north by undeveloped future TimberRidge property (Residential use), on the south and east by undeveloped future Sterling Ranch property (Residential use) and to the west by Vollmer Road. The property is zoned PUD. 70 single family residential lots and associated public roadway are planned within this plat. 11 of the planned lots west of Sand Creek will be 2.5 Ac. min. in size with rural public roads. No overlot grading will take place on these lots, only grading for the public roadway, proposed on-site EDB and landscape berm adjacent to Vollmer Road. The 59 planned lots east of Sand Creek will consist of urban lots (12,000 SF min. in size) and the majority of these lots will be overlot graded along with the public urban roadways and on-site EDB.

The majority of the property is grassland/pasture with little to no trees. Sand Creek traverses the property north-south. This drainageway corridor is planned to remain undisturbed to the greatest extent possible except for the required drainage improvements per the Sand Creek DBPS and the road crossing over Sand Creek (Poco Road extension). These improvements will be constructed with Filing No. 1. As a requirement by El Paso County, along with Filing No. 1 development, a secondary emergency gravel access road will also be constructed east of Sand Creek and north of the Filing No. 1 property up to Arroya Lane. Along the easterly boundary exist several natural ravines and drainageways that will require temporary sediment facilities to capture and treat off-site stormwater flows. All temporary facilities are also shown on the Grading and Erosion Control Plan and are located on future TimberRidge property. Thus, roadway, utility corridor and temporary sediment control grading will take place outside of the Filing No. 1 boundary. The total disturbance area is shown on the Grading and Erosion Control Plan and totals 58.50 ac. The Sand Creek corridor does contain some wetland areas that will be protected during site grading operations. Any disturbance to these wetland areas with the construction of the creek improvements will be under a 404 permit. No springs, landscape irrigation return flows or construction dewatering is anticipated within the limits of construction of this site. Should any of the above items occur unexpectedly, BMPs shall be implemented immediately. The local regulatory agency shall be notified for approval of the BMPs and methods.

- **RECEIVING WATERS**

| | |
|---|--|
| Name of Receiving Water(s) | Sand Creek |
| Size/Type/Location of Outfall(s) | 18" RCP and 42" RCP Pond outfalls from the on-site EDB's into existing Sand Creek Channel (Reach SC-9) |
| Discuss discharge connection to Municipal system (include system name, location, and ultimate receiving water(s): | Two proposed EDB's to outfall locations directly into Sand Creek and ultimately to (Fountain Creek) |

- **PROPOSED CONSTRUCTION ACTIVITY**

Proposed construction activities within this project include grading of the proposed roadways, overlot grading for urban lots, stormwater quality ponds, temporary sediment ponds and utility/road installation for the construction of single family homes.

- **PROPOSED SEQUENCE OF ACTIVITY/CONSTRUCTION TIMING**

Proposed construction activities within this project include grading and utility/road construction for the proposed residential subdivision. Sequence of activities will be based upon site contractor timing and scheduling. Upon site contractor selection, contractor to include sequence of activities schedule in the section provided in the Appendix of this report. A standard sequence of events typically includes the following:

- 1) Install perimeter, interior & exterior BMPs
- 2) Clear and grub site for proposed lots, roadways and pond areas
- 3) Excavation & installation of utilities
- 5) Curb and Gutter, paving, installation of permanent erosion control measures within the sideroad ditches of the rural roadways
- 6) Building construction including drilling for individual wells and installation of septic systems for the 2.5 ac. lots west of Sand Creek.

provide schedule for each event

update
schedule

The anticipated start and completion time period for site grading operations is to start in Late Summer 2019 with site final site stabilization by Summer 2020. This time schedule could vary depending on individual home sales and construction schedules.

- **EROSION AND SEDIMENT CONTROL**

Erosion control measures shall be implemented in a manner that will protect properties and public facilities from the adverse effects of erosion and sedimentation as a result of construction and earthwork activities. In order to prevent a net increase of sediment load, Best Management Practices will be implemented during the construction life of this project. A silt fence will be installed per the approved grading and erosion control plan in order to protect undisturbed areas. All roads will be inspected to ensure that sediment from on-site construction activity is not being discharged with the stormwater. Roadways shall be swept as needed for controlling tracking of mud onto public roadways. Vehicle tracking control pads will aid in minimizing soil tracking onto roadways. All disturbed areas, not sodded, will be reseeded with a native seed mix and watered until a mature stand is established. All areas disturbed will be protected with silt fence, diversion swales and temporary sediment traps until such time as the site has been re-vegetated. Vegetation and vegetated buffers shall be preserved as much as possible. Wherever feasible, vegetated buffers shall be maintained free from vehicle/equipment parking, storage, stockpiles, or other impacts.

- **DEVELOPMENT AREA/AREAS AND VOLUME STATEMENT**

| | |
|-----------------------------------|--|
| Total Platted Site Area | ___ 72.42 ___ Acres |
| Initial Site area to be disturbed | ___ 62.5 ___ Acres for roadway const/utility |
| Percent disturbance | ___ 86 ___ % |

quantity doesnt match
acres discussed
above. Verify
disturbance area

The total volume of earthwork cut/fill operations is more than 500 CY.

- **SOILS INFORMATION**

The average soil condition reflects Hydrologic Group "B" (Pring coarse sandy loam and Kettle gravelly loamy sand) as determined by the "Soil Survey of El Paso County Area," prepared by the Soil Conservation Service.



Based upon the current proposed development of this site, the following 100 year runoff coefficients would be realized:

| | |
|------------------------------------|--|
| Existing site runoff coefficient = | = <u>.36</u> |
| Developed site runoff coefficient | = <u>.47</u> <u>landscaped/ seeded areas</u> |
| Percent disturbance | = <u>.90</u> <u>street/paved areas</u> |

- EXISTING SITE CONDITIONS**

The site is located within the Sand Creek Drainage Basin. Currently, the site has a general drainage pattern that flows in a southwesterly and southeasterly direction towards Sand Creek.

This site is currently 95% vegetated with native grasses and very few trees. Existing slopes range from approximately 2 to 8 percent with some steeper slopes directly adjacent and along both sides of Sand Creek, forming the natural channel.

Reference the Site Description portion of this report for further site conditions.

SITE MAP

With approval of this report is the approved grading, erosion and stormwater quality control plan for the subject property which will serve as the SWMP site map. This document contains site specific grading and erosion control BMP measures as required and approved by the El Paso County. Limits of disturbance, areas of cuts/fills, proposed stockpile areas, areas used for storage of materials, equipment, soil, or waste, batch plants, minimum and maximum cut/fill slopes, existing limits of significant vegetation, locations of springs, streams, and/or wetlands, and existing facilities (including but not limited to: detention/drainage facilities, structures, retaining walls, gas main, water main, wastewater main, electric and telecom vaults, fences, sidewalks, trails, curbs and streets) will be represented on this plan. The site map will depict locations of specific interim and ultimate stormwater management BMPs throughout the lifetime of the project. Erosion control cost assurances must be posted to the county in the amount listed on Financial Assurance Estimate Form. The site map/grading plan shall be amended to include any additional interim or phased BMPs over and above measures included on the site map, as required by contractor's construction



schedule. All construction BMP details will be included in the appendix of this report. Detail sheets include installation and maintenance requirements. Also reference "Drainage Criteria Manual, Volume 2 Stormwater Quality Policies, Procedure, and Best Management Practices" and the El Paso County ECM for additional information and guidance regarding construction BMPs.

STORMWATER MANAGEMENT

- **SWMP ADMINISTRATOR** Change to "Qualified Stormwater Manager"

The SWMP Administrator can be an individual(s), position, or title – this entity is responsible for developing, implementing, maintaining, and revising the SWMP. The Administrator is the contact for all SWMP related issues and is the entity responsible for its accuracy, completeness, and implementation. Therefore, the SWMP Administrator should be a person with authority to adequately manage and direct day to day stormwater quality management activities on the subject site. Reference the Appendix of this report for the SWMP permit application which names the individual/entity applying for the permit and naming the Administrator of the SWMP.

- **POTENTIAL POLLUTANT SOURCES**

Potential pollutant sources which shall be evaluated for potential to contribute pollutants to stormwater discharge from the subject site may include the following:

- Disturbed and stored soils
- Vehicle tracking of sediments
- Management of contaminated soils
- Loading and unloading operations
- Outdoor storage activities (building materials, utility piping and appertenances, etc.)
- Vehicle and equipment maintenance and fueling
- Significant dust or particulate generating processes
- On-site waste management practices (waste piles, liquid wastes, dumpsters)
- Concrete truck/equipment washing, including the concrete truck chute associated fixtures and equipment

- Non-industrial waste sources such as worker trash and portable toilets
- Other areas or procedures where potential spills can occur.

The location and description of these areas are shown on the attached SWMP Site Map.

• **BMPS FOR POLLUTANT PREVENTION** Discuss all potential pollutant sources described above

The following are common practices to mitigate potential pollutants:

- Wind erosion shall be controlled by sprinkling site roadways and/or temporary stabilizing stockpiles. Each dump truck hauling material from the site will be required to be covered with a tarpaulin. with water
- Sanitary facilities shall be placed at a minimum of 10' from any curblineline and 50' from any inlet. If not feasible for the project, use of a secondary containment shall be implemented.
- Equipment fueling and Maintenance Services – a designated fueling area will be established to contain any spill resulting from fueling, maintenance, or repair of equipment. Contractors will be responsible for containment, cleanup, and disposal of any leak or spill and any costs associated with the cleanup and disposal.
- Chemical products shall be protected from precipitation, free from ground contact, and stored properly to prevent damage from equipment or vehicles.
- Material stockpiles (soils, soil amendments, debris/trash piles) – All construction trash and debris will be deposited in the dumpster.
- Sediment and Migration of Sediment – Sweeping operations will take place as needed to keep roadways maintained. The perimeter of the site will be evaluated for any potential impact resulting from trucking operations or sediment migration from the site. BMP devices will be placed to protect storm system inlets should any roadway tracking or sediment migration occur. Describe how
- Snow removal and/or stockpiling will be considered prior to placement at the site. Snow stockpiles must be kept away from any stormwater conveyance system (i.e., inlets, ponds, outfall locations, roadway surfaces, etc.) discuss which ones

- **BMP SELECTION**

Selection of the appropriate BMP will limit the source of the pollutant. Guidance for the selection process can be found by referencing the City of Colorado Springs/El Paso County “Drainage Criteria Manual Volume 2”.

During grading and construction activity for the subject site, silt fence will be installed per the approved plan in order to protect undisturbed areas. Check dams will be installed along all permanent and temporary sideroad swales to minimize erosion in areas of concentrated stormwater. These sideroad swales route the stormwater directly to several proposed sediment basins intended to collect stormwater and filter the sediment before conveyance further downstream. Inlet protection will be installed at all proposed culverts to ensure no downstream pollutants will leave the site. Vehicle tracking control pads will be installed at all access points to the property. Regular maintenance and inspection of these facilities will be necessary throughout grading operations and until vegetation is reestablished to ensure proper function of the sediment basin temporary outlet structures.

- **MATERIAL HANDLING & SPILL PREVENTION**

Where materials can impact stormwater runoff, existing and planned practices that reduce the potential for pollution must be included in a spill prevention plan, to be provided by the contractor.

Spill prevention plans shall include

- Notification procedures to be used in the event of an accident
- Instruction for clean-up procedures, and identification of a spill kit location
- Provisions for absorbents to be made available for use in fuel areas, and for containers to be available for used absorbents
- Procedures for properly washing out concrete truck chutes and other equipment in a manner and location so that the materials and wash water can not discharge from the site and never into a storm sewer system or stream.

You need to talk about the material handling, spill prevention, and response plan and procedures here in the SWMP.

- **CONCRETE/ASPHALT BATCH PLANTS**

Where applicable, the SWMP must be amended by the contractor to describe and locate on the Site Map all practices used to control stormwater pollution from dedicated asphalt or concrete batch plants. **Are you planning on having a batch plant at the Site?**

- **WASTE MANAGEMENT AND DISPOSAL INCLUDING CONCRETE WASHOUT**

Where applicable, the SWMP must be amended by the contractor to describe and locate on the Site Map all practices implemented at the site to control stormwater pollution from all construction site wastes (liquid and solid) including concrete washout activities. **Are you planning on having a concrete washout at the Site?**

- **DOCUMENTING SELECTED BMPS**

As discussed in the SITE MAP section of this report, documentation of the selected BMPs will be included on the site map / overlot grading plan included in this report. The site map/overlot grading plan shall be amended to include any additional interim or phased BMPs over and above measures included on the site map, as required by contractor's construction schedule.

- **NON-STORMWATER DISCHARGES**

The SWMP permit covers only discharges composed entirely of stormwater and does not include the following: fire fighting activities, landscape irrigation return flow, uncontaminated springs, and concrete washout water.

- **STORMWATER DEWATERING**

The discharge of pumped water, ONLY from excavations, ponds, depressions, etc., to surface waters or to a municipal separate storm-sewer system is allowed by the Stormwater Construction Permit as long as the dewatering activity and associated BMPs are identified in the SWMP (including location of activity), and the BMPs are implemented in accordance with the SWMP. Where applicable, all stormwater and groundwater dewatering practices implemented to control stormwater pollution for dewatering must be amended in the SWMP and Site Map by the contractor.

- **REVISING BMPs AND THE SWMP**

The implemented BMPs will need to be modified and maintained regularly to adapt to changing site conditions and to ensure that all potential stormwater pollutants are properly managed. The BMPs and pollutant sources must be reviewed on an ongoing basis by the Administrator as assigned by the Permit. With any construction project, special attention must be paid to construction phasing and therefore revisions to the SWMP to include any additional or modification to the BMPs and SWMP report. The SWMP must be modified or amended to accurately reflect the field conditions. Examples include - but are not limited to – removal of BMPs, identification of new potential pollutant procedures, and changes to information provided in the site map/overlot grading plan. SWMP revisions must be made prior to changes in site conditions. The SWMP should be viewed as a “living document” throughout the lifetime of the project.

FINAL STABILIZATION AND

LONG-TERM STORMWATER MANAGEMENT

Permanent stabilization of the site includes seeding and mulching the site. Seeding and mulching consists of loosening soil, applying topsoil (if permanent seeding) and drill seeding disturbed areas with grasses and crimping in straw mulch to provide immediate protection from raindrop and wind erosion. As the grass cover becomes established, provide long term stabilization of exposed soils.

Once the construction activity ceases permanently, the area will be stabilized with permanent seed and mulch. All areas that will not be impacted by construction of buildings will be seeded and landscaped as feasible. After seeding, each area will be mulched with straw. The straw mulch is to be tacked into place by a disc with blades set nearly straight. Topsoil stockpiles will be stabilized with temporary seed and mulch. Areas of the site that are to be paved will be temporarily stabilized until asphalt is applied.

The temporary perimeter controls (silt fence or equivalent) will not be removed until all construction activities at the site are complete and soils have been stabilized. Upon completion of construction activities, the site shall be inspected to ensure all equipment, waste materials, and debris have been removed. All other BMPs or other control practices and measure that are to remain after completion of construction will be inspected to ensure they are properly functioning. Final stabilization is reached when all soil disturbing activities at the site have been completed and uniform vegetative cover has been

and final stabilization has been achieved.



established with a density of at least 70% of pre-disturbance levels. For purposes of the SWMP, establishment of a vegetative cover capable of providing erosion control equivalent to the pre-existing conditions at the site can be considered final stabilized.

Long term stormwater quality management will be handled by the proposed on-site stormwater quality and detention facilities proposed in the Master Development Drainage Plan and Final Drainage Reports by CCES. All facilities will detain stormwater to release rates less than or equal to historic levels as well as provide water quality capture volume prior to releasing stormwater to downstream facilities.

INSPECTION AND MAINTENANCE PROCEDURES

All drainage facilities will be monitored using the enclosed "Monitoring and Maintenance Inspection Record" checklist (Appendix II).

- **SWMP OWNER/ADMINISTRATOR INSPECTION PROCEDURES & SCHEDULES**

The Owner/Administrator shall adhere to the following inspection procedures during the development of the site:

1. Make thorough inspection of the stormwater management system at least every 14 days.
2. Make thorough inspection of the stormwater management system within 24 hrs of each precipitation event that creates runoff.
3. If any system deficiencies are noted, corrective actions must begin immediately. Documentation of inspection must be available if requested.
4. Records of the site inspections or facility replacement modifications must be kept at the site within this report.
5. 30 day inspections must take place on this site where construction activity is complete, but vegetative cover is still being established.

or snow melt

In this report's appendix, a site inspection form has been included for use by the Inspector. Upon completion of this form, the document is to be kept in the provided folder also in the rear of this report.

- **BMP MAINTENANCE / REPLACEMENT & FAILED BMPs**

The Stormwater Construction Permit requires that all erosion and sediment control practices and other protective measures identified in the SWMP be maintained in effective and operation condition. A preventative maintenance program should be in place to prevent BMP breakdowns and failures by proactively maintaining or replacing BMPs and equipment. The inspections process should also include procedures to ensure that BMPs are replaced or new BMPs added to adequately manage the pollutant sources at the site. This procedure is part of the ongoing process of revising the BMPs and SWMP as previously discussed, and any changes shall be recorded in the SWMP.

- **RECORD KEEPING AND DOCUMENTING INSPECTIONS** Qualified Stormwater Manager

The following items must be documented by site contact or contractor as part of the site inspections and kept in a notebook located on-site with the approved grading and erosion control plans:

- Inspection date
- Name(s) and title(s) of personnel making inspection
- Location(s) of discharges of sediment or other pollutants from site
- Location(s) of BMPs that need to be maintained
- Location(s) of BMPs that fail to operate as designed or proved inadequate in a particular location
- Location(s) where additional BMPs are needed that were not in place at time of inspection
- Deviations from the minimum inspection schedule
- Descriptions of corrective action for items above including dates and measures taken to prevent future violations
- Signed statement of compliance added to the report after correction action has been taken

EROSION CONTROL COST OPINION

| ITEM | DESCRIPTION | QUANTITY | UNIT COST | COST |
|--------------|--|----------|------------|-----------------------------|
| 1. | Permanent Seeding | 10 AC. | \$800/AC. | \$ 8,000.00 |
| 2. | Mulching | 10 AC. | \$750/AC. | \$ 7,500.00 |
| 3. | Permanent E.C Blanket | 3,200 SY | \$6.00/SY | \$ 19,200.00 |
| 4. | Perm. Pond BMP Const. | 1,000 CY | \$20/CY | \$ 20,000.00 |
| 5. | Perm. Pond BMP Spillway | 3 EACH | \$5,000/EA | \$ 15,000.00 |
| 6. | Perm. Pond BMP Outlet | 3 EACH | \$8,000/EA | \$ 24,000.00 |
| 7. | Safety Fence | 1,050 LF | \$3.00/LF | \$ 3,150.00 |
| 8. | Temporary E.C. Blanket | 1,500 SY | \$3.00/SY | \$ 4,500.00 |
| 9. | Vehicle Tracking Control | 2 EACH | \$2,370/EA | \$ 4,740.00 |
| 10. | Silt Fence | 7,600 LF | \$2.50/LF | \$ 19,000.00 |
| 11. | Temporary Seeding | 5 AC. | \$628/AC. | \$ 3,140.00 |
| 12. | Temporary Mulch | 5 AC. | \$750/AC. | \$ 3,750.00 |
| 13. | Erosion Bales | 75 EACH | \$25.00/EA | \$ 1,875.00 |
| 14. | Rock Check Dams | 8 EACH | \$500/EA | \$ 4,000.00 |
| 15. | Inlet Protection | 10 EACH | \$167/EA | \$ 1,670.00 |
| 16. | Sediment Basin | 8 EACH | \$1,762/EA | \$ 14,096.00 |
| 17. | Concrete Washout | 1 EA. | \$900/EA. | \$ 900.00 |
| | Maintenance (35% of construction BMPs) | | | \$ 20,184.85 |
| TOTAL | | | | <u>\$ 171,555.85</u> |

Classic Consulting Engineers & Surveyors cannot and does not guarantee that the construction cost will not vary from these opinions of probable construction costs. These opinions represent our best judgment as design professionals familiar with the construction industry and this development in particular.

PREPARED BY:

Classic Consulting Engineers & Surveyors, LLC

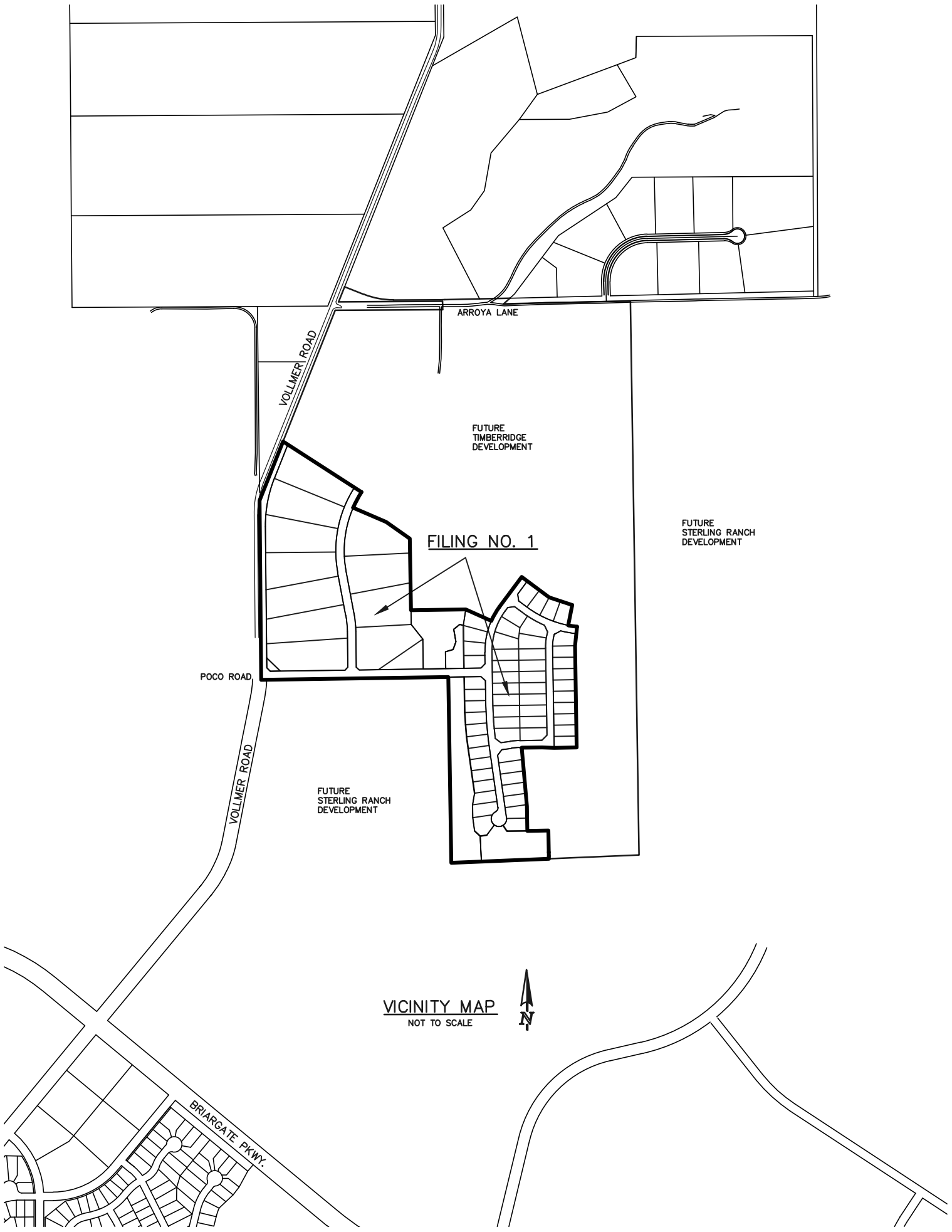


Marc A. Whorton, P.E.
Project Manager

maw/1185.00/SWMP Report Vol2.doc



VICINITY MAP



ARROYA LANE

VOLLMER ROAD

FUTURE
TIMBERRIDGE
DEVELOPMENT

FILING NO. 1

FUTURE
STERLING RANCH
DEVELOPMENT

POCO ROAD

VOLLMER ROAD

FUTURE
STERLING RANCH
DEVELOPMENT

VICINITY MAP
NOT TO SCALE



BRIARGATE PKWY.

COPY OF PERMIT APPLICATION

General permit application for stormwater discharges associated with construction activity.





COLORADO

Department of Public Health & Environment

Dedicated to protecting and improving the health and environment of the people of Colorado

ASSIGNED PERMIT NUMBER

Date Received ____/____/____
MM DD YYYY
Revised: 10-2017

STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES APPLICATION COLORADO DISCHARGE PERMIT SYSTEM (CDPS)

PHOTO COPIES, FAXED COPIES, PDF COPIES OR EMAILS WILL NOT BE ACCEPTED.

For Applications submitted on paper - Please print or type. Original signatures are required.

All items must be completed accurately and in their entirety for the application to be deemed complete. Incomplete applications will not be processed until all information is received which will ultimately delay the issuance of a permit. If more space is required to answer any question, please attach additional sheets to the application form. Applications or signature pages for the application may be submitted by mail or hand delivered to:

Colorado Department of Public Health and Environment, 4300 Cherry Creek Drive South, WQCD-P-B2, Denver, CO 80246-1530

For Applications submitted electronically

Please note that you can ONLY complete the feedback form by downloading it to a PC or Mac/Apple computer and opening the Application with Adobe Reader or a similar PDF reader. The form will NOT work with web browsers, Google preview, Mac preview software or on mobile devices using iOS or Android operating systems.

If application is submitted electronically, processing of the application will begin at that time and not be delayed for receipt of the signed document.

Any additional information that you would like the Division to consider in developing the permit should be provided with the application. Examples include effluent data and/or modeling and planned pollutant removal strategies.

Beginning July 1, 2016, invoices will be based on acres disturbed.

DO NOT PAY THE FEES NOW - Invoices will be sent after the receipt of the application.

Disturbed Acreage for this application (see page 4)

- Less than 1 acre (\$83 initial fee, \$165 annual fee)
- 1-30 acres (\$175 initial fee, \$350 annual fee)
- Greater than 30 acres (\$270 initial fee, \$540 annual fee)

PERMIT INFORMATION

Reason for Application: NEW CERT RENEW CERT EXISTING CERT# _____

Applicant is: Property Owner Contractor/Operator

A. CONTACT INFORMATION - *indicates required

* PERMITTED ORGANIZATION FORMAL NAME: _____

1) * PERMIT OPERATOR - the party that has operational control over day to day activities - may be the same as owner.

Responsible Person (Title): _____

Currently Held By (Person): FirstName: _____ LastName: _____

Telephone: _____ Email Address: _____

Organization: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Per Regulation 61 : All reports required by permits, and other information requested by the Division shall be signed by the permittee or by a duly authorized representative of that person. A person is a duly authorized representative only if:

- (i) The authorization is made in writing by the permittee
- (ii) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and
- (iii) The written authorization is submitted to the Division

2) **OWNER - party has ownership or long term lease of property - may be the same as the operator.**

Same as 1) Permit Operator

Responsible Person (Title): _____

Currently Held By (Person): FirstName: _____ LastName: _____

Telephone: _____ Email Address: _____

Organization: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Per Regulation 61 : All reports required by permits, and other information requested by the Division shall be signed by the permittee or by a duly authorized representative of that person. A person is a duly authorized representative only if:

- i. The authorization is made in writing by the permittee.
- ii. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a **named individual** or any individual occupying a **named position**); and
- iii. The written authorization is submitted to the Division.

3) ***SITE CONTACT** local contact for questions relating to the facility & discharge authorized by this permit for the facility

Same as 1) Permit Operator

Responsible Person (Title): _____

Currently Held By (Person): FirstName: _____ LastName: _____

Telephone: _____ Email Address: _____

Organization: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

4) ***BILLING CONTACT** if different than the permittee.

Same as 1) Permit Operator

Responsible Person (Title): _____

Currently Held By (Person): FirstName: _____ LastName: _____

Telephone: _____ Email Address: _____

Organization: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

5) **OTHER CONTACT TYPES (check below) Add pages if necessary:**

Responsible Person (Title): _____

Currently Held By (Person): FirstName: _____ LastName: _____

Telephone: _____ Email Address: _____

Organization: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Environmental Contact

Consultant

Stormwater MS4 Responsible Person

Inspection Facility Contact

Compliance Contact

Stormwater Authorized Representative

B) PERMITTED PROJECT/FACILITY INFORMATION

Project/Facility Name _____

Street Address or Cross Streets _____

(e.g., Park St and 5 Ave; CR 21 and Hwy 10; 44 Ave and Clear Creek) ; A street name without an address, intersection, mile marker, or other identifying information describing the location of the project is not adequate. For **linear projects**, the route of the project should be described as best as possible using the starting point for the address and latitude and longitude - more clearly defined in the required map)

City: _____ County: _____ Zip Code: _____

Facility Latitude/Longitude - List the latitude and longitude of the excavation(s) resulting in the discharge(s). If the exact soil disturbing location(s) are not known, list the latitude and longitude of the center point of the construction project. If using the center point, be sure to specify that it is the center point of construction activity. The preferred method is GPS and Decimal Degrees.

Latitude _____ . _____ Longitude _____ . _____ (e.g., 39.70312°, 104.93348°)
Decimal Degrees (to 5 decimal places) Decimal Degrees (to 5 decimal places)

This information may be obtained from a variety of sources, including:

- **Surveyors or engineers** for the project should have, or be able to calculate, this information.
- **U.S. Geological Survey topographical map(s)**, available at area map stores.
- Using a **Global Positioning System (GPS) unit** to obtain a direct reading.
- **Google** - enter address in search engine, select the map, right click on location, and select "what's here".

Note: the latitude/longitude required above is not the directional degrees, minutes, and seconds provided on a site legal description to define property boundaries.

C) MAP (Attachment) If no map is submitted, the application cannot be submitted.

Map: Attach a map that indicates the site location and that CLEARLY shows the boundaries of the area that will be disturbed. A vicinity map is not adequate for this purpose.

D) LEGAL DESCRIPTION - only for Subdivisions

Legal description: If subdivided, provide the legal description below, or indicate that it is not applicable (**do not** supply Township/Range/Section or metes and bounds description of site)

Subdivision(s): _____ Lot(s): _____ Block(s) _____

OR Not applicable (site has not been subdivided)

E) AREA OF CONSTRUCTION SITE - SEE PAGE 1 - WILL DETERMINE FEE

Provide both the total area of the construction site, and the area that will undergo disturbance, in acres.

Total area of project disturbance site (acres): _____

Note: aside from clearing, grading and excavation activities, disturbed areas also include areas receiving overburden (e.g., stockpiles), demolition areas, and areas with heavy equipment/vehicle traffic and storage that disturb existing vegetative cover.

Part of Larger Common Plan of Development or Sale, (i.e., total, including all phases, filings, lots, and infrastructure not covered by this application)

F) NATURE OF CONSTRUCTION ACTIVITY

Check the appropriate box(es) or provide a brief description that indicates the general nature of the construction activities. (The full description of activities must be included in the Stormwater Management Plan.)

Commercial Development

Residential Development

Highway and Transportation Development

Pipeline and Utilities (including natural gas, electricity, water, and communications)

Oil and Gas Exploration and Well Pad Development

Non-structural and other development (i.e. parks, trails, stream realignment, bank stabilization, demolition, etc.)

G) ANTICIPATED CONSTRUCTION SCHEDULE

Construction Start Date: _____ Final Stabilization Date: _____

- *Construction Start Date* - This is the day you expect to begin ground disturbing activities, including grubbing, stockpiling, excavating, demolition, and grading activities.
- *Final Stabilization Date* - in terms of permit coverage, this is when the site is finally stabilized. This means that all ground surface disturbing activities at the site have been completed, and all disturbed areas have been either built on, paved, or a uniform vegetative cover has been established with an individual plant density of at least 70 percent of pre-disturbance levels. **Permit coverage must be maintained until the site is finally stabilized. Even if you are only doing one part of the project, the estimated final stabilization date must be for the overall project.** If permit coverage is still required once your part is completed, the permit certification may be transferred or reassigned to a new responsible entity(s).

H) RECEIVING WATERS (If discharge is to a ditch or storm sewer, include the name of the ultimate receiving waters)

Immediate Receiving Water(s): _____

Ultimate Receiving Water(s): _____

Identify the receiving water of the stormwater from your site. Receiving waters are any waters of the State of Colorado. This includes all water courses, even if they are usually dry. If stormwater from the construction site enters a ditch or storm sewer system, identify that system and indicate the ultimate receiving water for the ditch or storm sewer. **Note:** a stormwater discharge permit does not allow a discharge into a ditch or storm sewer system without the approval of the owner/operator of that system.

I) SIGNATURE PAGE

1. You may print and sign this document and mail the hard copy to the State along with required documents (address on page one).

2. Electronic Submission Signature

You may choose to submit your application electronically, along with required attachments. To do so, click the SUBMIT button below which will direct you, via e-mail, to sign the document electronically using the DocuSign Electronic Signature process. Once complete, you will receive via e-mail, an electronically stamped Adobe pdf of this application. Print the signature page from the electronically stamped pdf, sign it and mail it to the WQCD Permits Section to complete the application process (address is on page one of the application).

- The Division encourages use of the electronic submission of the application and electronic signature. This method meets signature requirements as required by the State of Colorado.
- The ink signed copy of the electronically stamped pdf signature page is also required to meet Federal EPA Requirements.
- Processing of the application will begin with the receipt of the valid electronic signature.

STORMWATER MANAGEMENT PLAN CERTIFICATION

By checking this box "I certify under penalty of law that a complete Stormwater Management Plan, as described in the stormwater management plan guidance, has been pre-pared for my activity. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the Stormwater Management Plan is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for falsely certifying the completion of said SWMP, including the possibility of fine and imprisonment for knowing violations."

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

"I understand that submittal of this application is for coverage under the State of Colorado General Permit for Stormwater Discharges Associated with Construction Activity for the entirety of the construction site/project described and applied for, until such time as the application is amended or the certification is transferred, inactivated, or expired." [Reg 61.4(1)(h)]

For DocuSign

Electronic Signature _____ Ink Signature _____ Date: _____

Signature of Legally Responsible Person or Authorized Agent (submission must include original signature)

Name (printed)

Title

Signature: The applicant must be either the owner and operator of the construction site. Refer to Part B of the instructions for additional information.

The application must be signed by the applicant to be considered complete. In all cases, it shall be signed as follows:

(Regulation 61.4 (1e))

- In the case of corporations, by the responsible corporate officer is responsible for the overall operation of the facility from which the discharge described in the form originates
- In the case of a partnership, by a general partner.
- In the case of a sole proprietorship, by the proprietor.
- In the case of a municipal, state, or other public facility, by either a principal executive officer, ranking elected official, (a principal executive officer has responsibility for the overall operation of the facility from which the discharge originates).

3rd Party Preparer: If this form was prepared by an authorized agent on behalf of the Permittee, please complete the field below.

Preparer Name (printed)

Email Address

**DO NOT INCLUDE A COPY OF THE STORMWATER MANAGEMENT PLAN
DO NOT INCLUDE PAYMENT—AN INVOICE WILL BE SENT AFTER THE CERTIFICATION IS ISSUED.**

| |
|--|
| |
| |
| |
| |
| |

CONTRACTOR SEQUENCE OF ACTIVITIES

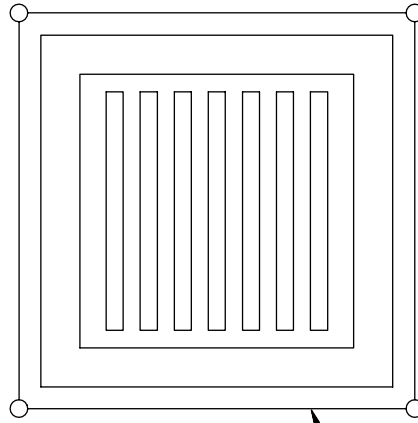
**COLORADO DISCHARGE PERMIT
SYSTEM (CDPS) CHECKLIST
Operation & Maintenance Inspection Record**

The following inspection records are to be used at each bi-monthly stormwater management system inspection and after any precipitation or snowmelt event that causes surface runoff. As a result of these inspections, the SWMP may need to be revised. The inspection records and revised SWMP shall be made available to the division upon request. If the construction activity lasts more than 12 months, a copy of the inspection records and revised SWMP shall be sent to the division by May 1 of each year covering April 1 to March 31.



**COMPLETED OPERATION AND
MAINTENANCE INSPECTION RECORDS**

STANDARD BMP DETAILS
W/ INSTALLATION AND MAINTENANCE REQUIREMENTS



FILTER FABRIC
(SEE FIG. SF-2 FOR
INSTALLATION
REQUIREMENTS)

FILTER FABRIC INLET PROTECTION

NTS

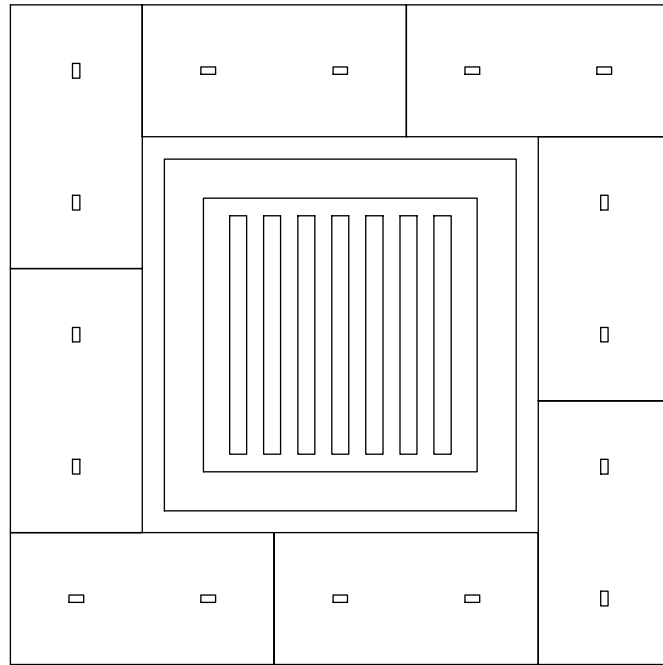
FILTER FABRIC INLET PROTECTION NOTES

INSTALLATION REQUIREMENTS

1. INLET PROTECTION SHALL BE INSTALLED IMMEDIATELY AFTER CONSTRUCTION OF INLET.
2. SEE SILT FENCE FIGURE SF-2 FOR INSTALLATION REQUIREMENTS.
3. POSTS ARE TO BE PLACED AT EACH CORNER OF THE INLET AND AROUND THE EDGES AT A MAXIMUM SPACING OF 3 FEET.

MAINTENANCE REQUIREMENTS

1. CONTRACTOR SHALL INSPECT INLET PROTECTION IMMEDIATELY AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL, AND WEEKLY DURING PERIODS NO RAINFALL.
2. DAMAGED, COLLAPSED, UNENTRENCHED OR INEFFECTIVE INLET PROTECTION SHALL BE PROMPTLY REPAIRED OR REPLACED.
3. SEDIMENT SHALL BE REMOVED FROM BEHIND FILTER FABRIC WHEN IT ACCUMULATES TO HALF THE EXPOSED GEOTEXTILE HEIGHT.
4. FILTER FABRIC PROTECTION SHALL BE REMOVED WHEN ADEQUATE VEGETATIVE COVER IS ATTAINED IN THE DRAINAGE AREA AS APPROVED BY THE CITY.



STRAW BALE
(SEE FIG. SBB-2
FOR INSTALLATION
REQUIREMENTS)

STRAW BALE INLET PROTECTION

NTS

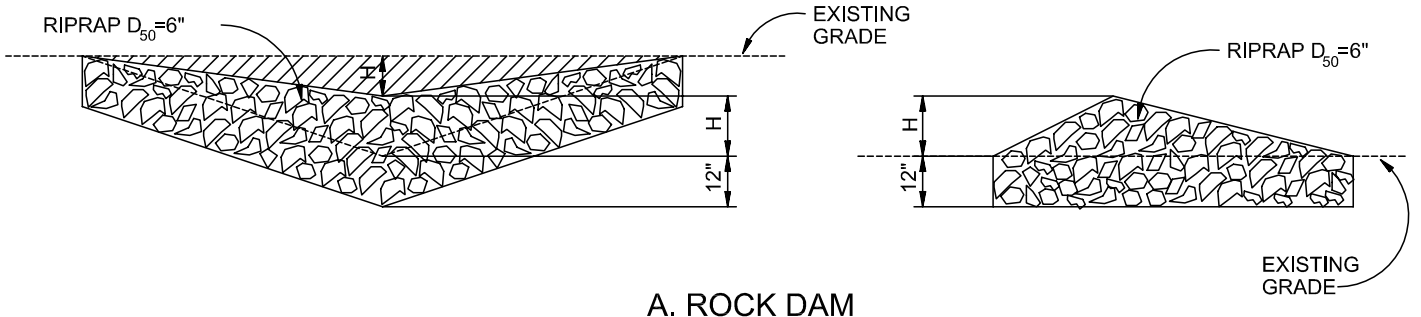
STRAW BALE INLET PROTECTION NOTES

INSTALLATION REQUIREMENTS

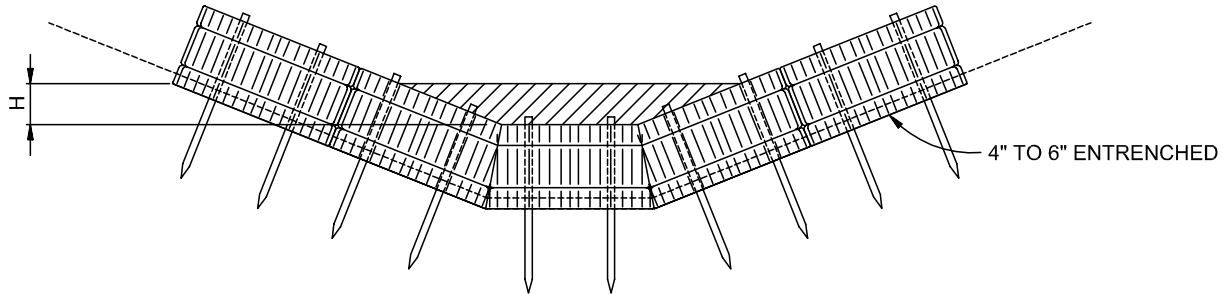
1. INLET PROTECTION SHALL BE INSTALLED IMMEDIATELY AFTER CONSTRUCTION OF INLET.
2. BALES ARE TO BE PLACED IN A SINGLE ROW AROUND THE INLET WITH THE END OF THE BALES TIGHTLY ABUTTING ONE ANOTHER.
3. SEE STRAW BALE BARRIER FIGURE SBB-2 FOR INSTALLATION REQUIREMENTS.

MAINTENANCE REQUIREMENTS

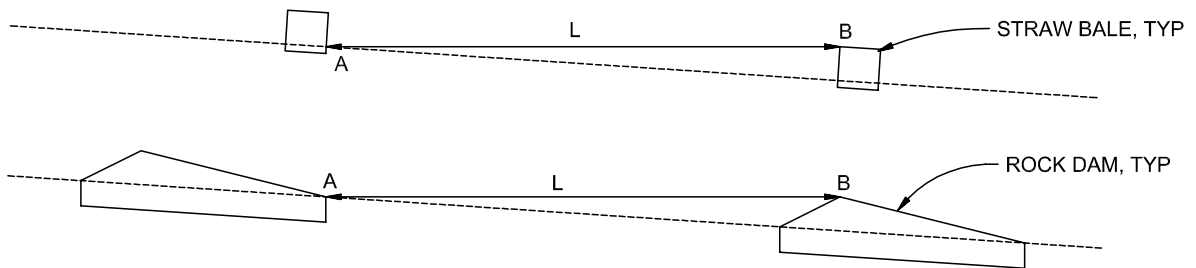
1. CONTRACTOR SHALL INSPECT STRAW BALE INLET PROTECTION IMMEDIATELY AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL, AND WEEKLY DURING PERIODS NO RAINFALL.
2. DAMAGED OR INEFFECTIVE INLET PROTECTION SHALL PROMPTLY BE REPAIRED, REPLACING BALES IF NECESSARY, AND UNENTRENCHED BALES NEED TO BE REPAIRED WITH COMPACTED BACKFILL MATERIAL.
3. SEDIMENT SHALL BE REMOVED FROM BEHIND STRAW BALES WHEN IT ACCUMULATES TO APPROXIMATELY 1/3 THE HEIGHT OF THE BARRIER.
4. INLET PROTECTION SHALL BE REMOVED WHEN ADEQUATE VEGETATIVE COVER IS ATTAINED WITHIN THE DRAINAGE AREA AS APPROVED BY THE CITY.



A. ROCK DAM



B. STRAW BALE CHECK DAM
(SEE STRAW BALE BARRIER INSTALLATION)



L= THE DISTANCE SUCH THAT POINTS A AND B ARE AT THE SAME ELEVATION.

C. SPACING CHECK DAMS

CHECK DAM

NTS

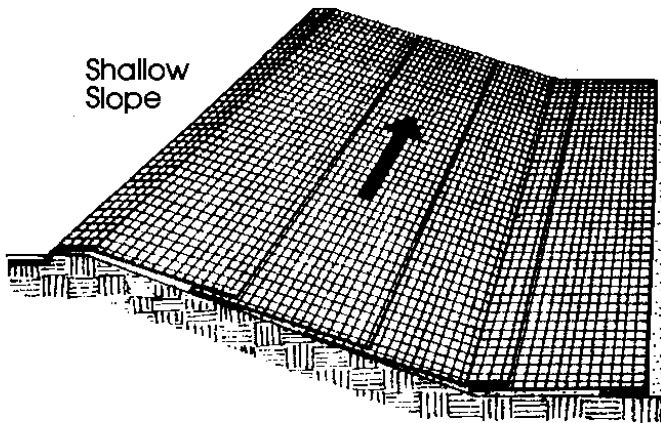
CHECK DAM NOTES

INSTALLATION REQUIREMENTS

1. STRAW BALES USED AS CHECK DAMS ARE TO MEET THE REQUIREMENTS STATED IN FIGURE SBB-2.
2. THE "H" DIMENSION SHALL BE SELECTED TO PROVIDE WEIR FLOW CONVEYANCE FOR 2-YEAR FLOW OR GREATER.

MAINTENANCE REQUIREMENTS

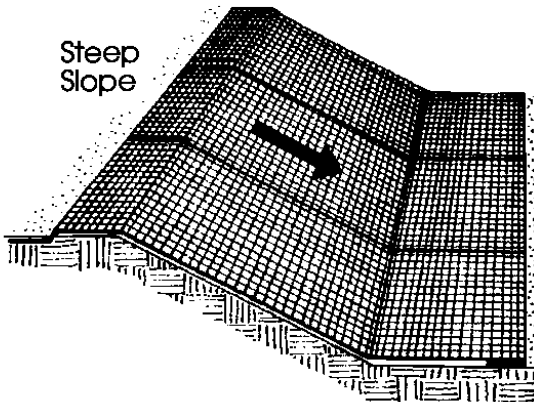
1. REGULAR INSPECTIONS ARE TO BE MADE OF ALL CHECK DAMS, ESPECIALLY AFTER STORM EVENTS.
2. REPLACE STONE AS NECESSARY TO MAINTAIN THE CORRECT HEIGHT OF THE DAM.
3. ACCUMULATED SEDIMENT AND DEBRIS IS TO BE REMOVED FROM BEHIND THE DAMS AFTER EACH STORM OR WHEN 1/2 OF THE ORIGINAL HEIGHT OF THE DAM IS REACHED.
3. CHECK DAMS ARE TO REMAIN IN PLACE AND OPERATIONAL UNTIL THE DRAINAGE AREA AND CHANNEL ARE PERMANENTLY STABILIZED.
4. WHEN CHECK DAMS ARE REMOVED THE CHANNEL LINING OR VEGETATION IS TO BE RESTORED.



Shallow Slope

On shallow slopes, strips of netting may be applied across the slope.

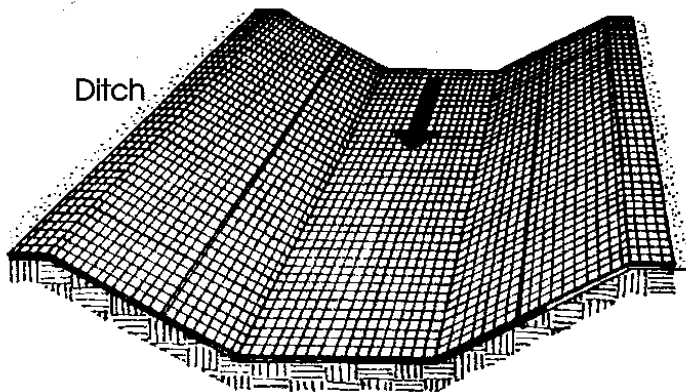
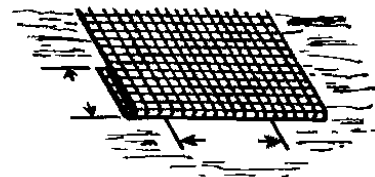
Where there is a berm at the top of the slope, bring the netting over the berm and anchor it behind the berm.



Steep Slope

On steep slopes, apply strips of netting parallel to the direction of flow and anchor securely.

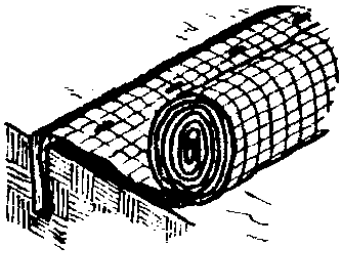
Bring netting down to a level area before terminating the installation. Turn the end under 6" and staple at 12" intervals.



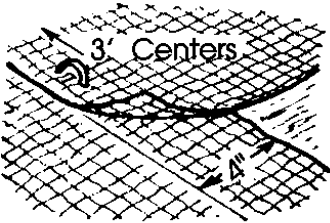
Ditch

In ditches, apply netting parallel to the direction of flow. Use check slots every 15 feet. Do not join strips in the center of the ditch.

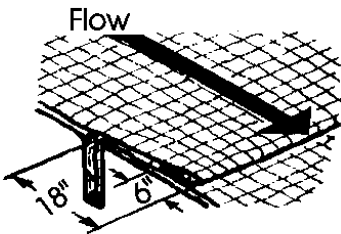
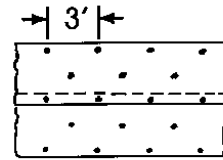
From: Virginia Soil and Water Conservation Commission, 1985



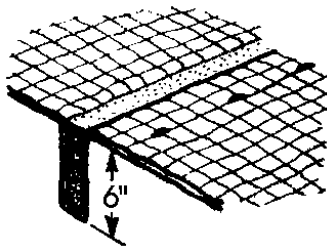
Anchor Slot: Bury the up-channel end of the net in a 6" deep trench. Tamp the soil firmly. Staple at 12" intervals across the net.



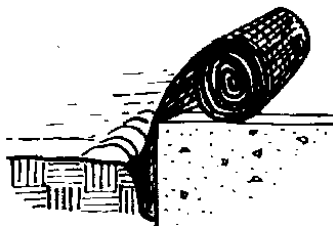
Overlap: Overlap edges of the strips at least 4". Staple every 3 feet down the center of the strip.



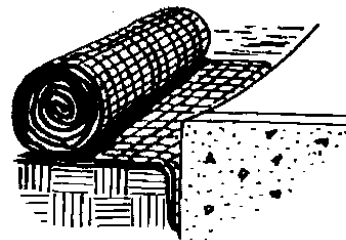
Joining Strips: Insert the new roll of net in a trench, as with the Anchor Slot. Overlap the up-channel end of the previous roll 18" and turn the end under 6". Staple the end of the previous roll just below the anchor slot and at the end at 12" intervals.



Check Slots: On erodible soils or steep slopes, check slots should be made every 15 feet. Insert a fold of the net into a 6" trench and tamp firmly. Staple at 12" intervals across the net. Lay the net smoothly on the surface of the soil - do not stretch the net, and do not allow wrinkles.



Anchoring Ends At Structures: Place the end of the net in a 6" slot on the up-channel side of the structure. Fill the trench and tamp firmly. Roll the net up the channel. Place staples at 12" intervals along the anchor end of the net.



From: Virginia Soil and Water Conservation Commission, 1985

City of Colorado Springs
Storm Water Quality

Figure ECB-2
Erosion Control Blanket
Installation Requirements

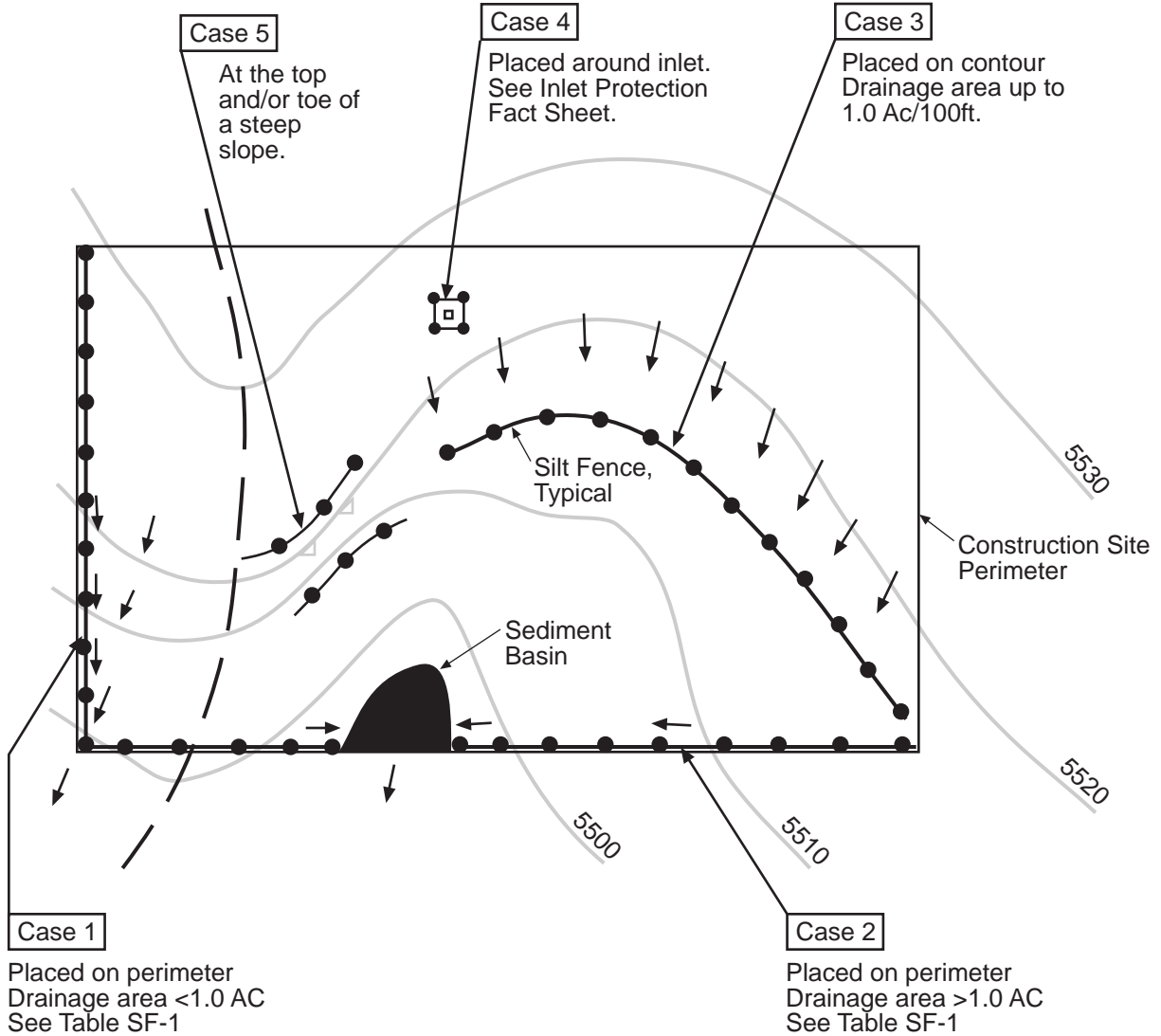


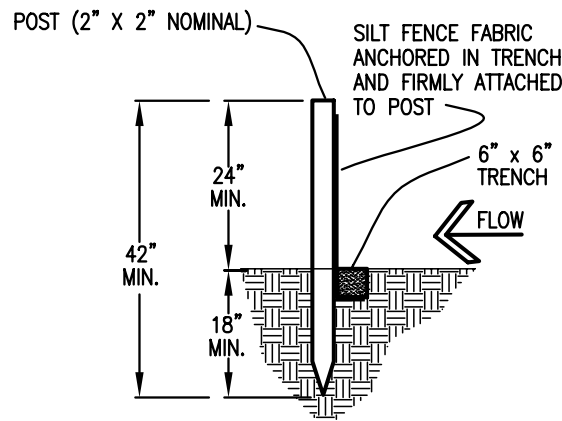
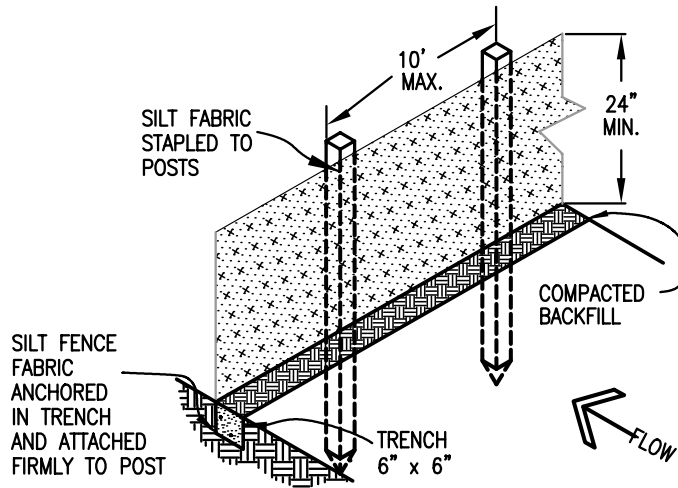
Table SF-1

| Silt Fence Used as Perimeter Control | Case 1 | | Case 2 DA > 1.0 AC |
|--------------------------------------|-------------------|-------------------|-----------------------|
| | DA < 0.25 AC | 0.25 < DA < 1 AC | |
| Continuous Grade | OK ⁽¹⁾ | OK ⁽¹⁾ | OK ⁽¹⁾ |
| Area of Concentrated Flow | OK | NO ⁽²⁾ | NO ⁽³⁾ |

(1) Temporary Swale or Straw Bale Barrier may be used as alternative to a Silt Fence.

(2) Check Dam may also be used as alternative to Silt Fence at low point.

(3) Sediment Basin is required for concentrated flow from drainage areas > 1.0 AC.



SILT FENCE

SILT FENCE NOTES

INSTALLATION REQUIREMENTS

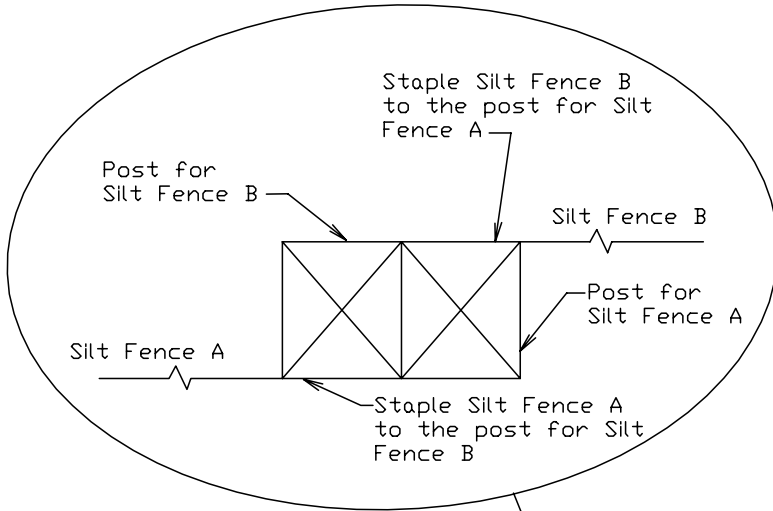
1. SILT FENCES SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
2. WHEN JOINTS ARE NECESSARY, SILT FENCE GEOTEXTILE SHALL BE SPLICED TOGETHER ONLY AT SUPPORT POST AND SECURELY SEALED.
3. METAL POSTS SHALL BE "STUDDED TEE" OR "U" TYPE WITH MINIMUM WEIGHT OF 1.33 POUNDS PER LINEAR FOOT. WOOD POSTS SHALL HAVE A MINIMUM DIAMETER OR CROSS SECTION DIMENSION OF 2 INCHES.
4. THE FILTER MATERIAL SHALL BE FASTENED SECURELY TO METAL OR WOOD POSTS USING WIRE TIES, OR TO WOOD POSTS WITH 3/4" LONG #9 HEAVY-DUTY STAPLES. THE SILT FENCE GEOTEXTILE SHALL NOT BE STAPLED TO EXISTING TREES.
5. WHILE NOT REQUIRED, WIRE MESH FENCE MAY BE USED TO SUPPORT THE GEOTEXTILE. WIRE FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY-DUTY WIRE STAPLES AT LEAST 3/4" LONG, TIE WIRES OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 6" AND SHALL NOT EXTEND MORE THAN 3' ABOVE THE ORIGINAL GROUND SURFACE.

6. ALONG THE TOE OF FILLS, INSTALL THE SILT FENCE ALONG A LEVEL CONTOUR AND PROVIDE AN AREA BEHIND THE FENCE FOR RUNOFF TO POND AND SEDIMENT TO SETTLE. A MINIMUM DISTANCE OF 5 FEET FROM THE TOE OF THE FILL IS RECOMMENDED.
7. THE HEIGHT OF THE SILT FENCE FROM THE GROUND SURFACE SHALL BE MINIMUM OF 24 INCHES AND SHALL NOT EXCEED 36 INCHES; HIGHER FENCES MAY INPOUND VOLUMES OF WATER SUFFICIENT TO CAUSE FAILURE OF THE STRUCTURE.

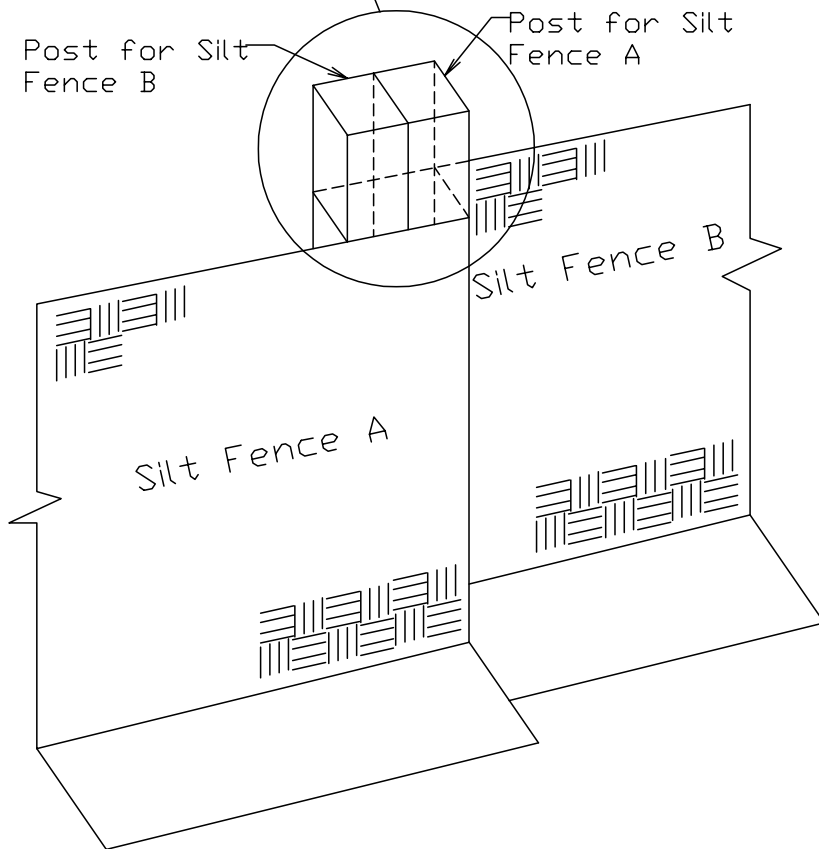
MAINTENANCE REQUIREMENTS

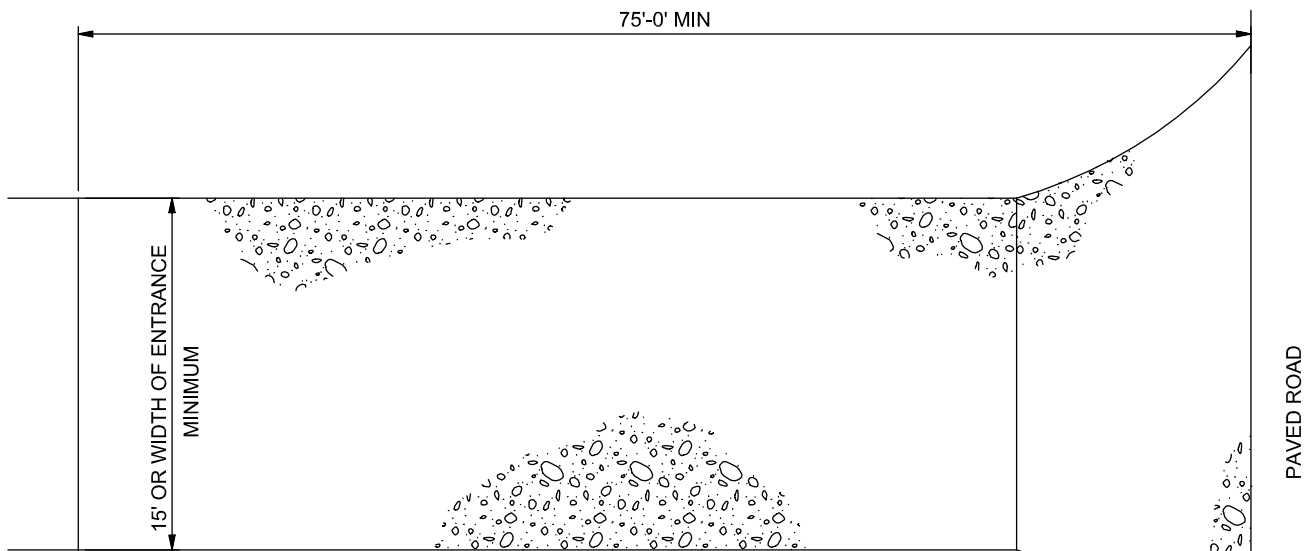
1. CONTRACTOR SHALL INSPECT SILT FENCES IMMEDIATELY AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL, AND WEEKLY DURING PERIODS OF NO RAINFALL. DAMAGED, COLLAPSED, UNENTRENCHED OR INEFFECTIVE SILT FENCES SHALL BE PROMPTLY REPAIRED OR REPLACED.
2. SEDIMENT SHALL BE REMOVED FROM BEHIND SILT FENCE WHEN IT ACCUMULATES TO HALF THE EXPOSED GEOTEXTILE HEIGHT.
3. SILT FENCES SHALL BE REMOVED WHEN ADEQUATE VEGETATIVE COVER IS ATTAINED AS APPROVED BY THE CITY.

Top View of Silt Fence Posts Detail

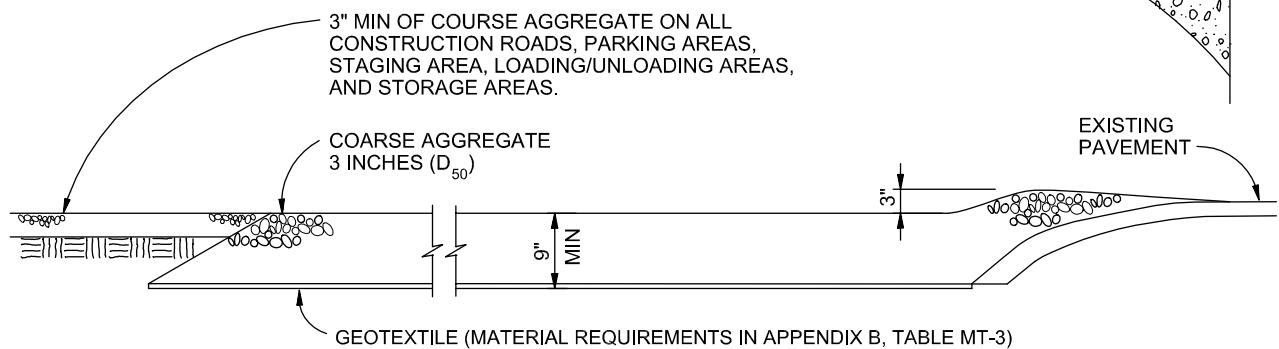


Refer to "Top View of Silt Fence Posts Detail"





PLAN



SECTION

VEHICLE TRACKING

NTS

VEHICLE TRACKING NOTES

INSTALLATION REQUIREMENTS

1. ALL ENTRANCES TO THE CONSTRUCTION SITE ARE TO BE STABILIZED PRIOR TO CONSTRUCTION BEGINNING.
2. CONSTRUCTION ENTRANCES ARE TO BE BUILT WITH AN APRON TO ALLOW FOR TURNING TRAFFIC, BUT SHOULD NOT BE BUILT OVER EXISTING PAVEMENT EXCEPT FOR A SLIGHT OVERLAP.
3. AREAS TO BE STABILIZED ARE TO BE PROPERLY GRADED AND COMPACTED PRIOR TO LAYING DOWN GEOTEXTILE AND STONE.
4. CONSTRUCTION ROADS, PARKING AREAS, LOADING/UNLOADING ZONES, STORAGE AREAS, AND STAGING AREAS ARE TO BE STABILIZED.
5. CONSTRUCTION ROADS ARE TO BE BUILT TO CONFORM TO SITE GRADES, BUT SHOULD NOT HAVE SIDE SLOPES OR ROAD GRADES THAT ARE EXCESSIVELY STEEP.

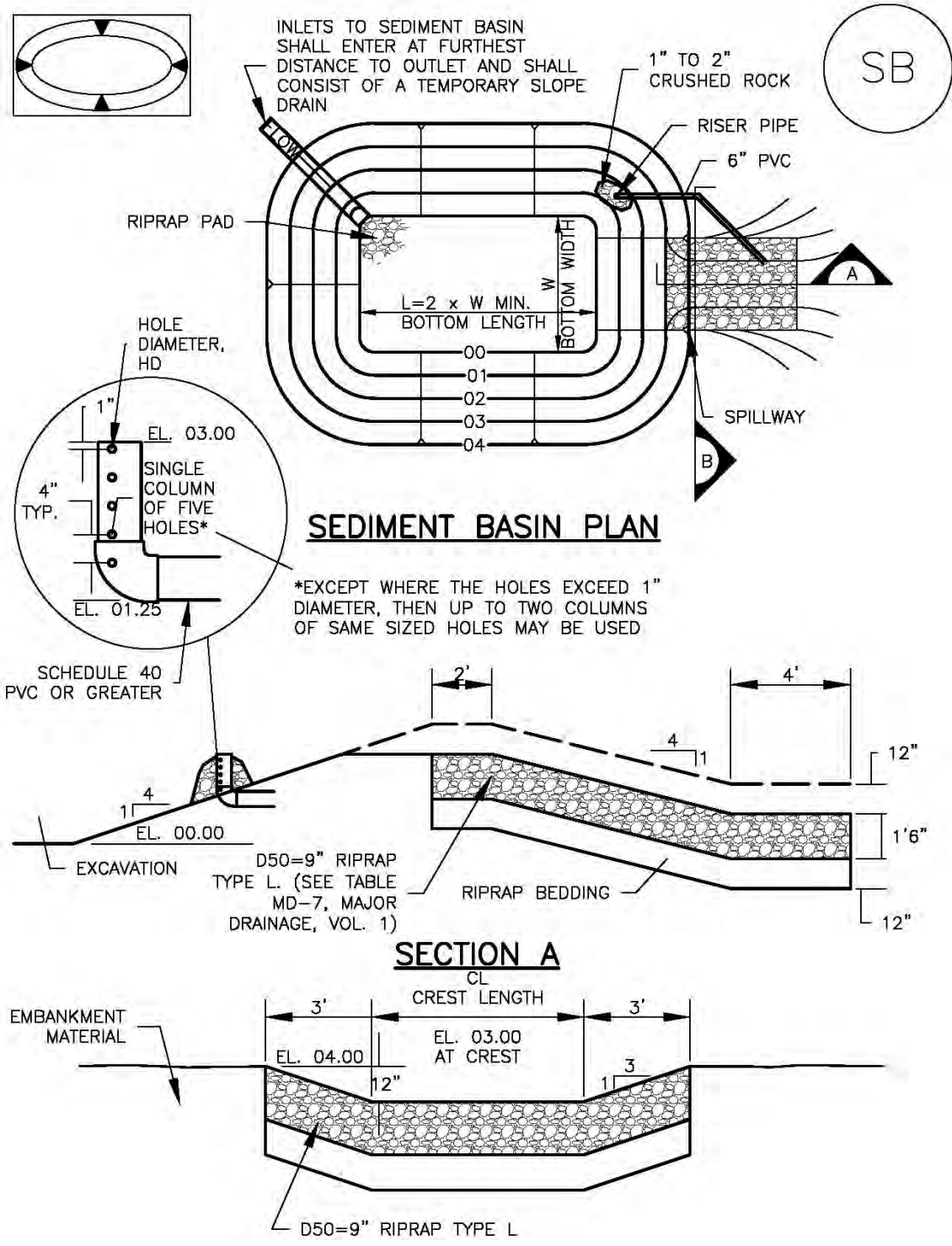
MAINTENANCE REQUIREMENTS

1. REGULAR INSPECTIONS ARE TO BE MADE OF ALL STABILIZED AREAS, ESPECIALLY AFTER STORM EVENTS.
2. STONES ARE TO BE REAPPLIED PERIODICALLY AND WHEN REPAIR IS NECESSARY.
3. SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED DAILY BY SHOVELING OR SWEEPING. SEDIMENT IS NOT TO BE WASHED DOWN STORM SEWER DRAINS.
4. STORM SEWER INLET PROTECTION IS TO BE IN PLACE, INSPECTED, AND CLEANED IF NECESSARY.
5. OTHER ASSOCIATED SEDIMENT CONTROL MEASURES ARE TO BE INSPECTED TO ENSURE GOOD WORKING CONDITION.

City of Colorado Springs
Stormwater Quality

Figure VT-2
Vehicle Tracking

Application Examples



| TABLE SB-1. SIZING INFORMATION FOR STANDARD SEDIMENT BASIN | | | |
|--|------------------------------|----------------------------------|--------------------------|
| Upstream Drainage Area (rounded to nearest acre), (ac) | Basin Bottom Width (W), (ft) | Spillway Crest Length (CL), (ft) | Hole Diameter (HD), (in) |
| 1 | 12 1/2 | 2 | 9/32 |
| 2 | 21 | 3 | 13/16 |
| 3 | 28 | 5 | 1/2 |
| 4 | 33 1/2 | 6 | 9/16 |
| 5 | 38 1/2 | 8 | 2 1/32 |
| 6 | 43 | 9 | 2 1/32 |
| 7 | 47 1/4 | 11 | 2 5/32 |
| 8 | 51 | 12 | 2 7/32 |
| 9 | 55 | 13 | 7/8 |
| 10 | 58 1/4 | 15 | 1 5/16 |
| 11 | 61 | 16 | 3 1/32 |
| 12 | 64 | 18 | 1 |
| 13 | 67 1/2 | 19 | 1 1/16 |
| 14 | 70 1/2 | 21 | 1 1/8 |
| 15 | 73 1/4 | 22 | 1 3/16 |

SEDIMENT BASIN INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
 - LOCATION OF SEDIMENT BASIN.
 - TYPE OF BASIN (STANDARD BASIN OR NONSTANDARD BASIN).
 - FOR STANDARD BASIN, BOTTOM WIDTH W, CREST LENGTH CL, AND HOLE DIAMETER, HD.
 - FOR NONSTANDARD BASIN, SEE CONSTRUCTION DRAWINGS FOR DESIGN OF BASIN INCLUDING RISER HEIGHT H, NUMBER OF COLUMNS N, HOLE DIAMETER HD AND PIPE DIAMETER D.
2. FOR STANDARD BASIN, BOTTOM DIMENSION MAY BE MODIFIED AS LONG AS BOTTOM AREA IS NOT REDUCED.
3. SEDIMENT BASINS SHALL BE INSTALLED PRIOR TO ANY OTHER LAND-DISTURBING ACTIVITY THAT RELIES ON ON BASINS AS AS A STORMWATER CONTROL.
4. EMBANKMENT MATERIAL SHALL CONSIST OF SOIL FREE OF DEBRIS, ORGANIC MATERIAL, AND ROCKS OR CONCRETE GREATER THAN 3 INCHES AND SHALL HAVE A MINIMUM OF 15 PERCENT BY WEIGHT PASSING THE NO. 200 SIEVE.
5. EMBANKMENT MATERIAL SHALL BE COMPACTED TO AT LEAST 95 PERCENT OF MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D698.
6. PIPE SCH 40 OR GREATER SHALL BE USED.
7. THE DETAILS SHOWN ON THESE SHEETS PERTAIN TO STANDARD SEDIMENT BASIN(S) FOR DRAINAGE AREAS LESS THAN 15 ACRES. SEE CONSTRUCTION DRAWINGS FOR EMBANKMENT, STORAGE VOLUME, SPILLWAY, OUTLET, AND OUTLET PROTECTION DETAILS FOR ANY SEDIMENT BASIN(S) THAT HAVE BEEN INDIVIDUALLY DESIGNED FOR DRAINAGE AREAS LARGER THAN 15 ACRES.

SEDIMENT BASIN MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. SEDIMENT ACCUMULATED IN BASIN SHALL BE REMOVED AS NEEDED TO MAINTAIN BMP EFFECTIVENESS, TYPICALLY WHEN SEDIMENT DEPTH REACHES ONE FOOT (I.E., TWO FEET BELOW THE SPILLWAY CREST).
5. SEDIMENT BASINS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS ACCEPTED BY THE LOCAL JURISDICTION.
6. WHEN SEDIMENT BASINS ARE REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

CWA MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. THE CWA SHALL BE REPAIRED, CLEANED, OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE. CONCRETE MATERIALS, ACCUMULATED IN PIT, SHALL BE REMOVED ONCE THE MATERIALS HAVE REACHED A DEPTH OF 2'.

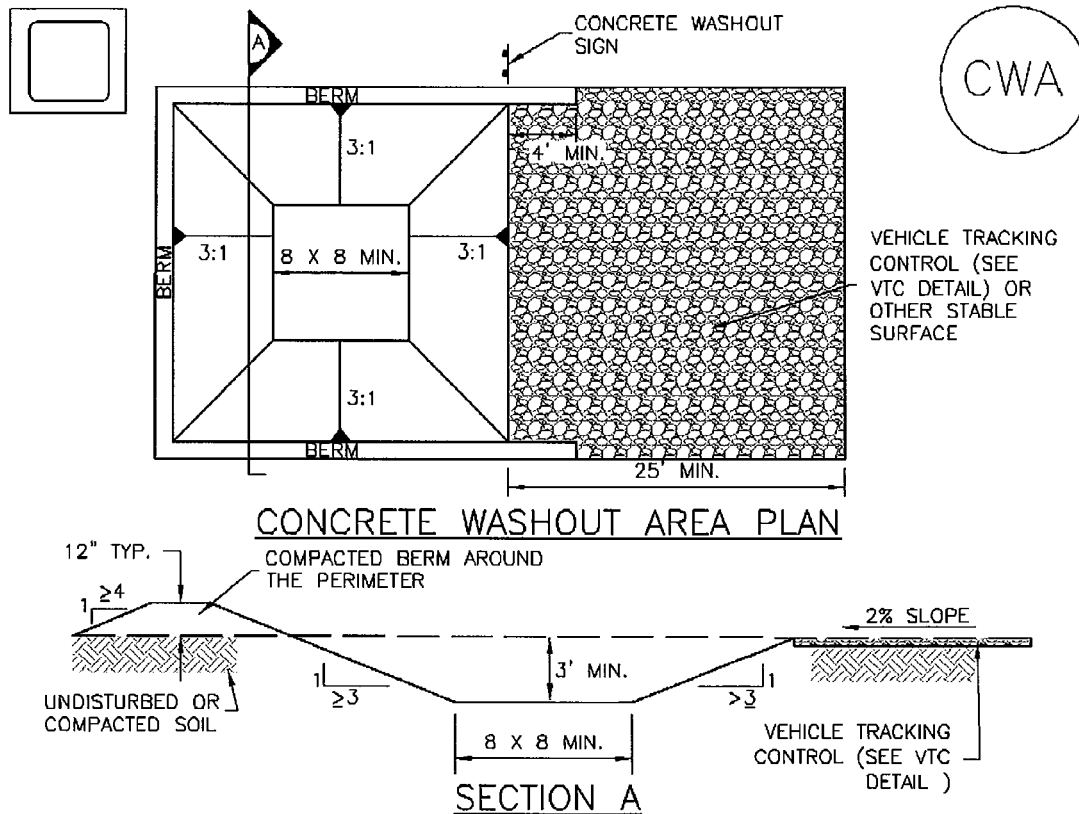
5. CONCRETE WASHOUT WATER, WASTED PIECES OF CONCRETE AND ALL OTHER DEBRIS IN THE SUBSURFACE PIT SHALL BE TRANSPORTED FROM THE JOB SITE IN A WATER-TIGHT CONTAINER AND DISPOSED OF PROPERLY.

6. THE CWA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.

7. WHEN THE CWA IS REMOVED, COVER THE DISTURBED AREA WITH TOP SOIL, SEED AND MULCH OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(DETAIL ADAPTED FROM DOUGLAS COUNTY, COLORADO AND THE CITY OF PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD).

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.



CWA-1. CONCRETE WASHOUT AREA

CWA INSTALLATION NOTES

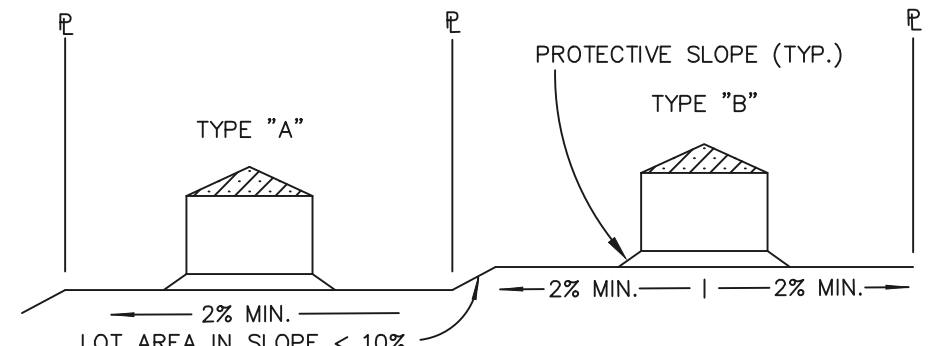
1. SEE PLAN VIEW FOR:
-CWA INSTALLATION LOCATION.
2. DO NOT LOCATE AN UNLINED CWA WITHIN 400' OF ANY NATURAL DRAINAGE PATHWAY OR WATERBODY. DO NOT LOCATE WITHIN 1,000' OF ANY WELLS OR DRINKING WATER SOURCES. IF SITE CONSTRAINTS MAKE THIS INFEASIBLE, OR IF HIGHLY PERMEABLE SOILS EXIST ON SITE, THE CWA MUST BE INSTALLED WITH AN IMPERMEABLE LINER (16 MIL MIN. THICKNESS) OR SURFACE STORAGE ALTERNATIVES USING PREFABRICATED CONCRETE WASHOUT DEVICES OR A LINED ABOVE GROUND STORAGE ARE SHOULD BE USED.
3. THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
4. CWA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8' BY 8' SLOPES LEADING OUT OF THE SUBSURFACE PIT SHALL BE 3:1 OR FLATTER. THE PIT SHALL BE AT LEAST 3' DEEP.
5. BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE MINIMUM HEIGHT OF 1'.
6. VEHICLE TRACKING PAD SHALL BE SLOPED 2% TOWARDS THE CWA.
7. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CWA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CWA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
8. USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

SITE MAP/ GRADING, EROSION CONTROL PLAN

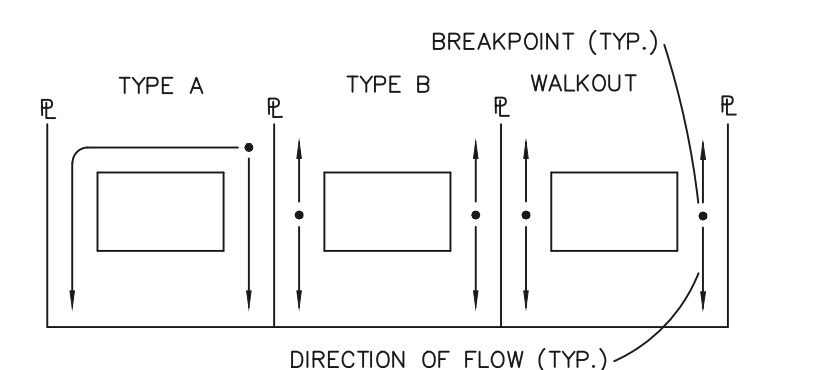


STANDARD NOTES FOR EL PASO COUNTY GRADING AND EROSION CONTROL PLANS:

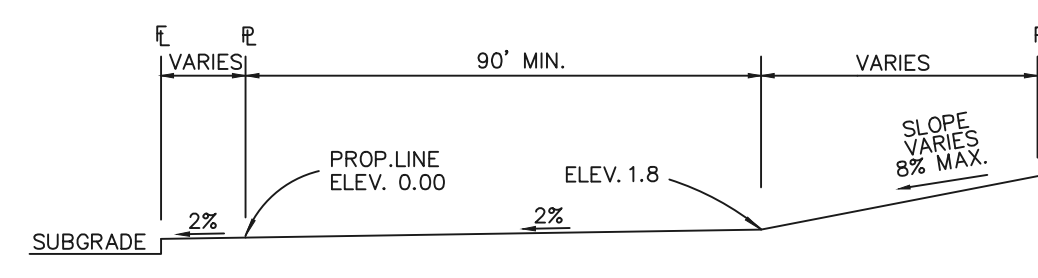
- STORMWATER DISCHARGES FROM CONSTRUCTION SITES SHALL NOT CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR DEGRADATION OF STATE WATERS. ALL WORK AND EARTH DISTURBANCE SHALL BE DONE IN A MANNER THAT MINIMIZES POLLUTION OF ANY ON-SITE OR OFF-SITE WATERS, INCLUDING WETLANDS.
- NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTATION, ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE MOST RECENT VERSION OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS TO REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING.
- A SEPARATE STORMWATER MANAGEMENT PLAN (SWMP) FOR THIS PROJECT SHALL BE COMPLETED AND AN EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP) ISSUED PRIOR TO COMMENCING CONSTRUCTION. DURING CONSTRUCTION THE SWMP IS THE RESPONSIBILITY OF THE DESIGNATED QUALIFIED STORMWATER MANAGER OR CERTIFIED EROSION CONTROL INSPECTOR AND SHALL BE LOCATED ON SITE AT ALL TIMES DURING CONSTRUCTION AND SHALL BE KEPT UP TO DATE WITH WORK PROGRESS AND CHANGES IN THE FIELD.
- ONCE THE ESQCP IS APPROVED AND A (NOTICE TO PROCEED) HAS BEEN ISSUED, THE CONTRACTOR MAY INSTALL THE INITIAL STAGE EROSION AND SEDIMENT CONTROL MEASURES AS INDICATED ON THE APPROVED G.C. A PRECONSTRUCTION MEETING BETWEEN THE CONTRACTOR, ENGINEER, AND EL PASO COUNTY WILL BE HELD PRIOR TO ANY CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE APPLICANT TO COORDINATE THE MEETING TIME AND PLACE WITH COUNTY STAFF.
- CONTROL MEASURES MUST BE INSTALLED PRIOR TO COMMENCEMENT OF ACTIVITIES THAT MAY CONTRIBUTE POLLUTANTS TO STORMWATER. TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, OR ANY DISTURBED LAND AREA SHALL BE COMPLETED IMMEDIATELY UPON COMPLETION OF THE DISTURBANCE.
- ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE MAINTAINED AND REMAIN IN EFFECTIVE OPERATING CONDITION UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED AND FINAL STABILIZATION IS ESTABLISHED. ALL PERSONS ENGAGED IN LAND DISTURBANCE ACTIVITIES SHALL ASSESS THE ADEQUACY OF CONTROL MEASURES AT THE SITE AND IDENTIFY IF CHANGES TO THOSE CONTROL MEASURES IS NEEDED TO ENSURE THE CONTINUED EFFECTIVE PERFORMANCE OF THE CONTROL MEASURES. ALL CHANGES TO TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES MUST BE INCORPORATED INTO THE STORMWATER MANAGEMENT PLAN PRIOR TO IMPLEMENTATION.
- TEMPORARY STABILIZATION SHALL BE IMPLEMENTED ON DISTURBED AREAS AND STOCKPILES WHERE GROUND DISTURBING CONSTRUCTION ACTIVITY HAS PERMANENTLY CEASED OR TEMPORARILY CEASED FOR LONGER THAN 14 DAYS. AN AREA THAT IS GOING TO REMAIN IN AN INTERIM STATE FOR MORE THAN 60 DAYS SHALL ALSO BE STABILIZED.
- FINAL STABILIZATION MUST BE IMPLEMENTED AT ALL APPLICABLE CONSTRUCTION SITES. FINAL STABILIZATION IS ACHIEVED WHEN ALL GROUND DISTURBING ACTIVITIES ARE COMPLETE AND ALL DISTURBED AREAS EITHER HAVE A UNIFORM VEGETATIVE COVER WITH INDIVIDUAL PLANT DENSITY OF 70 PERCENT OF PRE-DISTURBANCE LEVELS ESTABLISHED OR EQUIVALENT PERMANENT ALTERNATIVE STABILIZATION METHOD IS IMPLEMENTED. ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE REMOVED UPON FINAL STABILIZATION AND BEFORE PERMIT CLOSURE.
- ALL PERMANENT STORMWATER MANAGEMENT FACILITIES SHALL BE INSTALLED AS DEFINED IN THE APPROVED PLANS. ANY PROPOSED CHANGES THAT AFFECT THE HYDROLOGY OR HYDRAULICS OF A PERMANENT STORMWATER MANAGEMENT STRUCTURES MUST BE APPROVED BY THE ECM ADMINISTRATOR PRIOR TO IMPLEMENTATION.
- ANY EARTH DISTURBANCE SHALL BE CONDUCTED IN SUCH A MANNER SO AS TO EFFECTIVELY MINIMIZE ACCELERATED SOIL EROSION AND RESULTING SEDIMENTATION. ALL DISTURBANCES SHALL BE DESIGNED, CONSTRUCTED, AND COMPLETED SO THAT THE EXPOSED AREA OF ANY DISTURBED LAND SHALL BE LIMITED TO THE SHORTEST PRACTICAL PERIOD OF TIME. PRE-EXISTING VEGETATION SHALL BE PROTECTED AND MAINTAINED WITHIN 50 HORIZONTAL FEET OF A WATERS OF THE STATE, UNLESS INFEASIBLE.
- COMPACTION OF SOIL MUST BE PREVENTED IN AREAS DESIGNATED FOR INFILTRATION CONTROL MEASURES OR WHERE FINAL STABILIZATION WILL BE ACHIEVED BY VEGETATIVE COVER. AREAS DESIGNATED FOR INFILTRATION CONTROL SHALL ALSO BE PROTECTED FROM SEDIMENTATION DURING CONSTRUCTION UNTIL FINAL STABILIZATION IS ACHIEVED.
- ANY TEMPORARY OR PERMANENT FACILITY DESIGNED AND CONSTRUCTED FOR THE CONVEYANCE OF STORMWATER AROUND, THROUGH, OR FROM THE EARTH DISTURBANCE AREA SHALL BE A STABILIZED CONVEYANCE DESIGNED TO MINIMIZE EROSION AND THE DISCHARGE OF SEDIMENT OFF SITE.
- CONCRETE WASH WATER SHALL BE CONTAINED AND DISPOSED OF IN ACCORDANCE WITH THE SWMP. NO WASH WATER SHALL BE DISCHARGED TO OR ALLOWED TO RUNOFF TO STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES. CONCRETE WASHOUT SHALL NOT BE LOCATED IN AN AREA WHERE SHALLOW GROUNDWATER MAY BE PRESENT, OR WITHIN 50 FEET OF A SURFACE WATER BODY.
- DEWATERING OPERATIONS: UNCONTAMINATED GROUND WATER MAY BE DISCHARGED ON SITE, BUT MAY NOT LEAVE THE SITE IN THE FORM OF SURFACE RUNOFF.
- EROSION CONTROL BLANKETING IS TO BE USED ON SLOPES STEEPER THAN 3:1.
- BUILDING, CONSTRUCTION, EXCAVATION, OR OTHER WASTE MATERIALS SHALL NOT BE TEMPORARILY PLACED OR STORED IN THE STREET, ALLEY, OR OTHER PUBLIC WAY, UNLESS IN ACCORDANCE WITH AN APPROVED TRAFFIC CONTROL PLAN. BMP'S MAY BE REQUIRED BY EL PASO COUNTY ENGINEERING IF DEEMED NECESSARY, BASED ON SPECIFIC CONDITIONS AND CIRCUMSTANCES.
- VEHICLE TRACKING OF SOILS AND CONSTRUCTION DEBRIS OFF-SITE SHALL BE MINIMIZED. MATERIALS TRACKED OFFSITE SHALL BE CLEANED UP AND PROPERLY DISPOSED OF IMMEDIATELY.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL WASTES FROM THE CONSTRUCTION SITE FOR DISPOSAL IN ACCORDANCE WITH LOCAL AND STATE REGULATORY REQUIREMENTS. NO CONSTRUCTION DEBRIS, TREE SLASH, BUILDING MATERIAL WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURIED, DUMPED, OR DISCHARGED AT THE SITE.
- THE OWNER, SITE DEVELOPER, CONTRACTOR, AND/OR THEIR AUTHORIZED AGENTS SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL CONSTRUCTION DEBRIS, DIRT, TRASH, ROCK, SEDIMENT, AND SAND THAT MAY ACCUMULATE IN THE STORM SEWER OR OTHER DRAINAGE CONVEYANCE SYSTEM AND STORMWATER APPURTENANCES AS A RESULT OF SITE DEVELOPMENT.
- THE QUANTITY OF MATERIALS STORED ON THE PROJECT SITE SHALL BE LIMITED, AS MUCH AS PRACTICAL, TO THAT QUANTITY REQUIRED TO PERFORM THE WORK IN AN ORDERLY MANNER. ALL MATERIALS STORED ON-SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER, IN THEIR ORIGINAL CONTAINERS, WITH ORIGINAL MANUFACTURER'S LABELS.
- NO CHEMICALS ARE TO BE USED BY THE CONTRACTOR, WHICH HAVE THE POTENTIAL TO BE RELEASED IN STORMWATER UNLESS PERMISSION FOR THE USE OF A SPECIFIC CHEMICAL IS GRANTED IN WRITING BY THE ECM ADMINISTRATOR. IN GRANTING THE USE OF SUCH CHEMICALS, SPECIAL CONDITIONS AND MONITORING MAY BE REQUIRED.
- BULK STORAGE OF PETROLEUM PRODUCTS OR OTHER LIQUID CHEMICALS IN EXCESS OF 55 GALLONS SHALL HAVE ADEQUATE SECONDARY CONTAINMENT PROTECTION TO CONTAIN ALL SPILLS AND PREVENT ANY SPILLED MATERIAL FROM ENTERING STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES.
- NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE FLOW LINE OF THE CURB AND GUTTER OR IN THE DITCH FLOW LINE.
- INDIVIDUALS SHALL COMPLY WITH THE COLORADO WATER QUALITY CONTROL ACT (TITLE 25, ARTICLE 8, CRS), AND THE "CLEAN WATER ACT" (33 USC 1344), IN ADDITION TO THE REQUIREMENTS INCLUDED IN THE DCM VOLUME 1 AND THE ECM APPENDIX 1. ALL APPROPRIATE PERMITS MUST BE OBTAINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION (NPDES, FLOODPLAIN, 404, FUGITIVE DUST, ETC.). IN THE EVENT OF CONFLICTS BETWEEN THESE REQUIREMENTS AND LAWS, RULES, OR REGULATIONS OF OTHER FEDERAL, STATE, OR COUNTY AGENCIES, THE MORE RESTRICTIVE LAWS, RULES, OR REGULATIONS SHALL APPLY.
- ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.
- PRIOR TO ACTUAL CONSTRUCTION THE PERMITEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES.
- A WATER SOURCE SHALL BE AVAILABLE ON SITE DURING EARTHWORK OPERATIONS AND UTILIZED AS REQUIRED TO MINIMIZE DUST FROM EARTHWORK EQUIPMENT AND WIND.
- THE SOILS REPORTS FOR THIS SITE HAS BEEN PREPARED BY ENTECH ENGINEERING, INC. TITLED "SOIL GEOLOGY, GEOLOGIC HAZARD AND WASTEWATER STUDY - THE RETREAT AT TIMBER RIDGE, VOLLMER ROAD AND ARROYA LANE," DATED APRIL 12, 2017, REVISED DECEMBER 1, 2017 AND "SUBSURFACE SOIL INVESTIGATION OF THE RETREAT AT TIMBER RIDGE, FILING NO. 1 POCO ROAD, SAND CREEK CROSSING, DROF STRUCTURES AND DETENTION PONDS" DATED AUGUST 8, 2019. THESE REPORTS SHALL BE CONSIDERED A PART OF THESE PLANS.
- AT LEAST TEN (10) DAYS PRIOR TO THE ANTICIPATED START OF CONSTRUCTION, FOR PROJECTS THAT WILL DISTURB 1 ACRE OR MORE, THE OWNER OR OPERATOR OF CONSTRUCTION ACTIVITY SHALL SUBMIT A PERMIT APPLICATION FOR STORMWATER DISCHARGE TO THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY DIVISION. THE APPLICATION CONTAINS CERTIFICATION OF COMPLETION OF A STORMWATER MANAGEMENT PLAN (SWMP), OF WHICH THIS GRADING AND EROSION CONTROL PLAN MAY BE A PART. FOR INFORMATION OR APPLICATION MATERIALS CONTACT:
 COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT
 WATER QUALITY CONTROL DIVISION
 WQCD - PERMITS
 4300 CHERRY CREEK DRIVE SOUTH
 DENVER, CO 80246-1530
 ATTN: PERMITS UNIT



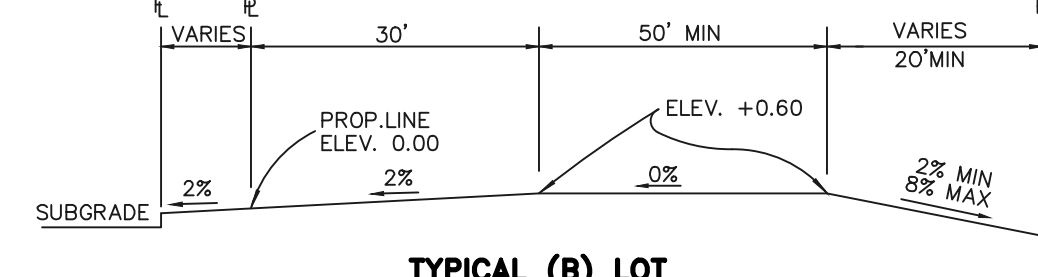
TYPICAL LOT SECTION DETAIL
N.T.S.



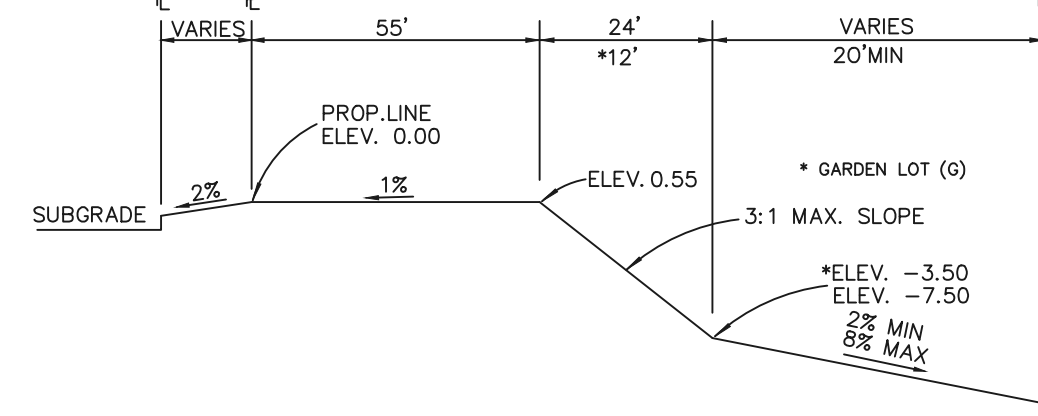
LOT DRAINAGE TYPES
N.T.S.



TYPICAL (A) LOT
N.T.S.



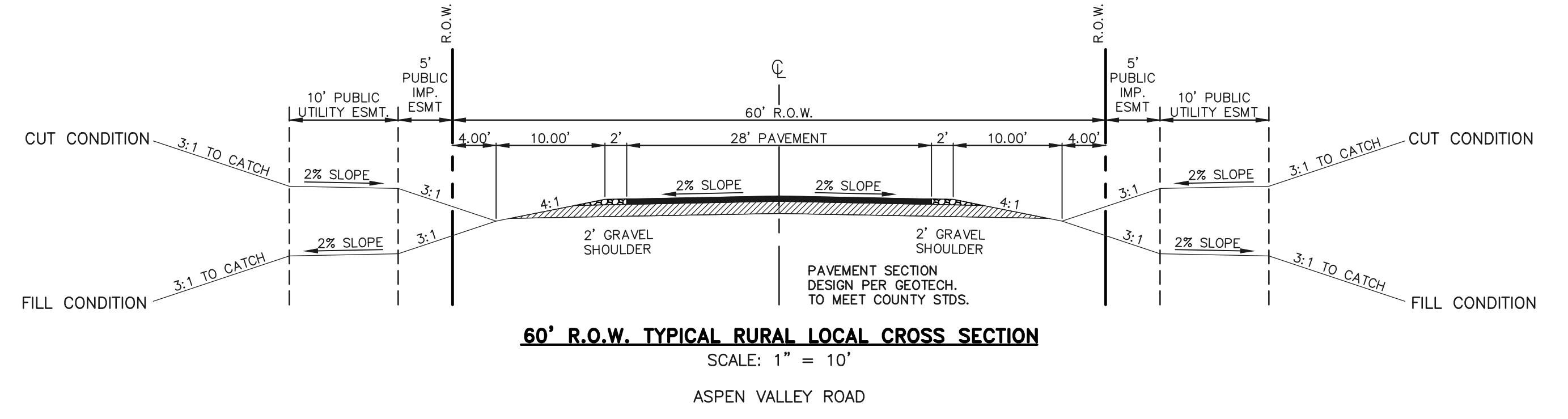
TYPICAL (B) LOT
N.T.S.



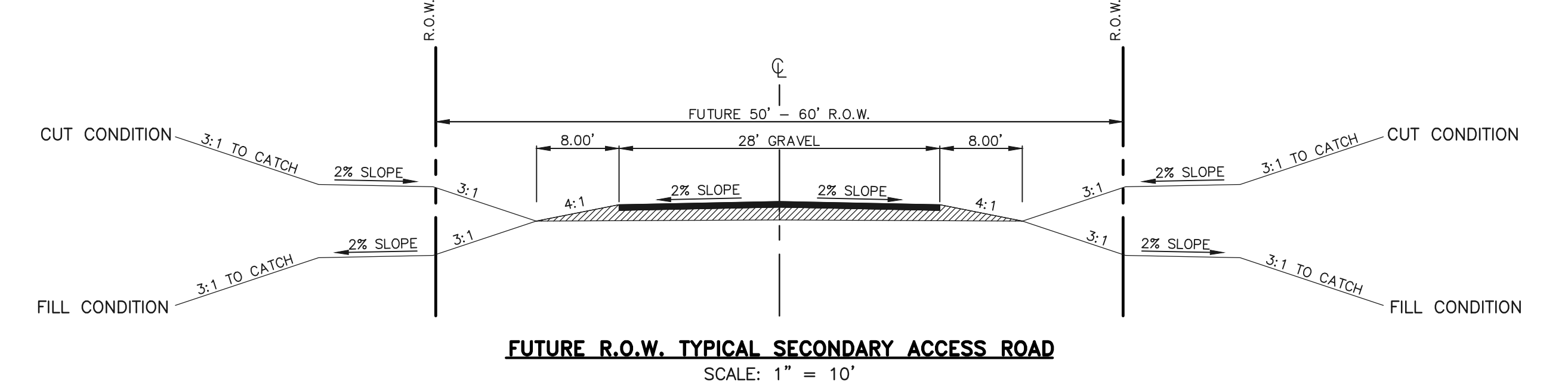
TYPICAL WALKOUT LOT (W/O) OR GARDEN (G)
N.T.S.

NOTES:

- BASED ON GREATER TYPICAL DEPTH OF PROPOSED LOTS, ALL LOT TEMPLATES ADJUSTED AND ADDITIONAL 5'.
- "T" LOTS OR "TRANSITION" LOTS OCCUR IN PLACES WHERE BOTH PROPERTY LINES CANNOT BE GRADED AS THE TYPICAL STANDARD LOT TEMPLATES SHOWN. THESE LOTS WILL STILL BE GRADED TO CREATE POSITIVE DRAINAGE AWAY FROM THE STRUCTURE.
- SIDE LOT SWALES ARE REQUIRED ON THE DOWNHILL LOTS, EITHER BY BUILDER OR GRADING CONTRACTOR.

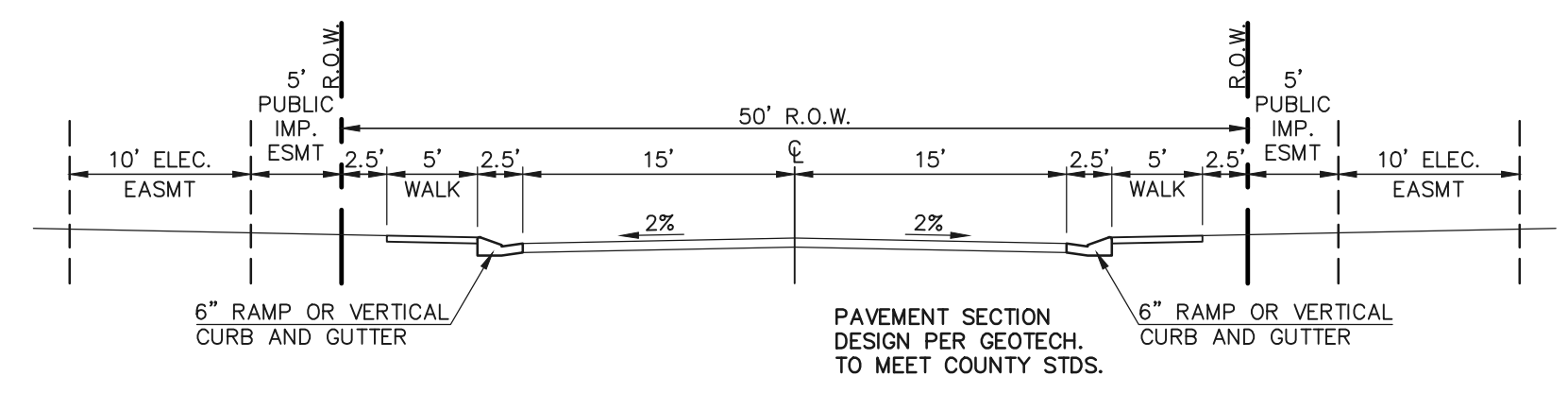


60' R.O.W. TYPICAL RURAL LOCAL CROSS SECTION
SCALE: 1" = 10'
ASPEN VALLEY ROAD

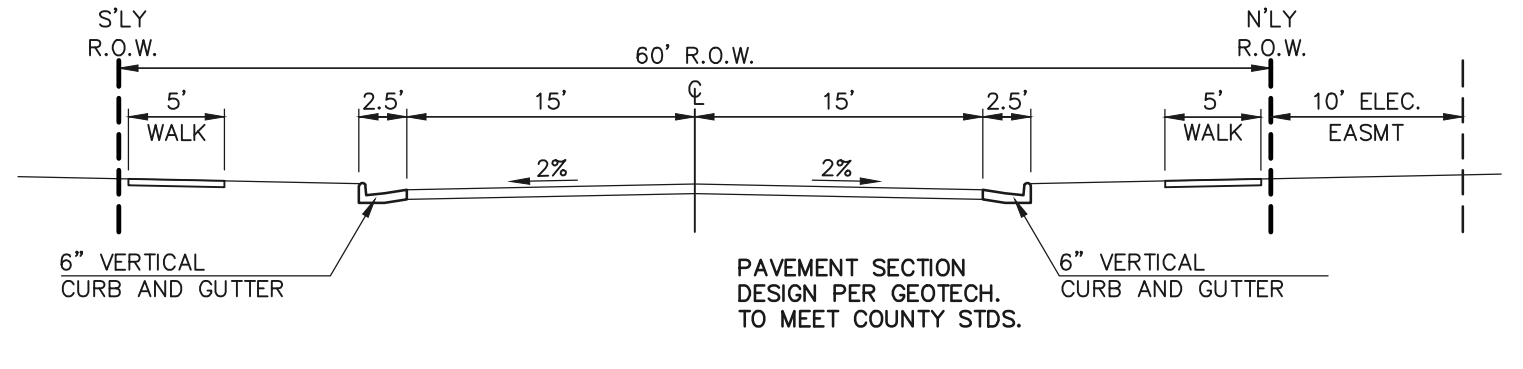


FUTURE R.O.W. TYPICAL SECONDARY ACCESS ROAD
SCALE: 1" = 10'
SECONDARY EMERGENCY ACCESS UP TO ARROYA LANE

NO ADDITIONAL IMPROVEMENTS REQUIRED AT THIS TIME ON THE EXISTING ARROYA LANE AS IT CURRENTLY FUNCTIONS AS A VIABLE EMERGENCY ACCESS DRIVE PER BLACK FOREST FIRE DISTRICT.
FUTURE PLATTING ADJACENT TO ARROYA LANE WILL REQUIRE ADDITIONAL IMPROVEMENTS TO THIS ROADWAY.



50' R.O.W. TYPICAL URBAN LOCAL CROSS SECTION
SCALE: 1" = 10'
ANTELOPE RAVINE DRIVE
RABBIT TAIL PLACE
ELK ANTLER LANE
BISON VALLEY TRAIL



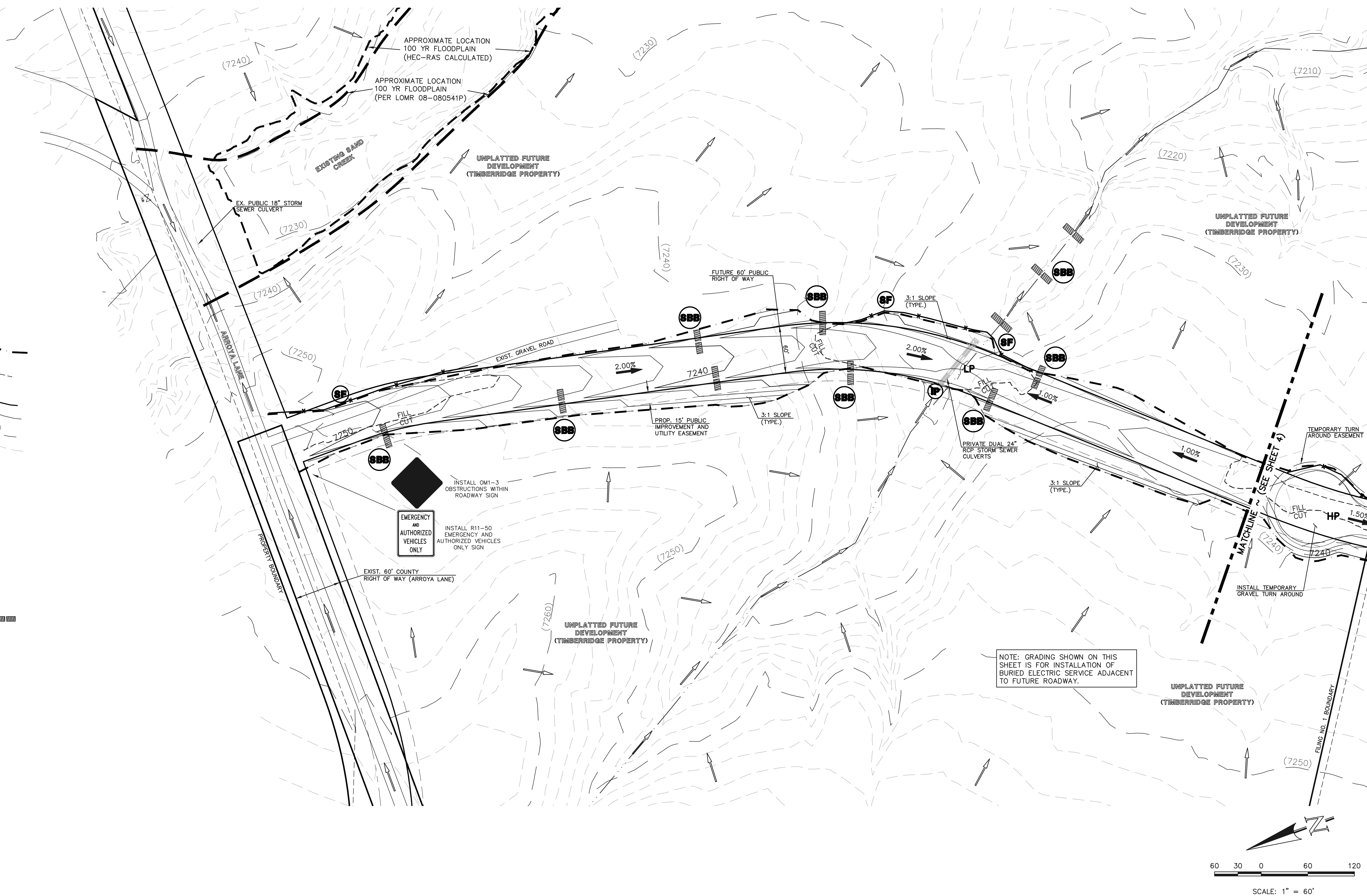
60' R.O.W. TYPICAL URBAN LOCAL CROSS SECTION
SCALE: 1" = 10'
POCO ROAD

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|--|--|------------------------------|---|---|
| 48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS 811 UTILITY NOTIFICATION CENTER OF COLORADO IT'S THE LAW THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. | NO. REVISION 1 REVISED PER COUNTY COMMENTS 2 REVISED PER COUNTY COMMENTS | DATE 06-10-19 01-21-20 | REVIEW: PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC MARC A. WHORTON, COLORADO P.E. #37155 | RETREAT AT TIMBERIDGE FILING NO. 1 CONSTRUCTION DRAWINGS STREET SECTIONS / EROSION CONTROL NOTES DESIGNED BY PRA SCALE DATE 04-05-19 DRAWN BY PRA (H) 1" = N/A SHEET 2 OF 35 CHECKED BY (V) 1" = N/A JOB NO. 1185.00 |
| | CLASSIC CONSULTING | | | |

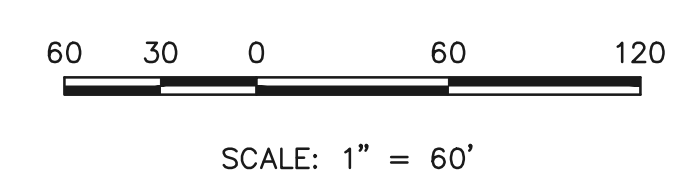
LEGEND

- LIMIT OF GRADING
- CUT/FILL LINE
- PROPOSED CONTOUR-10
- PROPOSED CONTOUR-2
- EXISTING CONTOUR-10
- EXISTING CONTOUR-2
- SILT FENCE
- SILT FENCE
- SEEDING/MULCHING
- VEHICLE TRACKING CONTROL
- STRAW BALES
- INLET PROTECTION
- EROSION CONTROL BLANKET
- TEMPORARY SEDIMENT BASIN
- EXIST. DIRECTION OF FLOW
- DIRECTION OF FLOW
- HIGH POINT
- LOW POINT
- A LOT
- B LOT
- WALKOUT LOT
- NATURAL LOT
- TRANSITION LOT
- GARDEN LOT
- EROSION CONTROL BLANKET (NORTH AMERICAN GREEN - SC150 OR EQUIVALENT) TO BE INSTALLED ON ALL 3:1 SLOPES OR GREATER

SEEDING/MULCHING NOTE:
SEEDING AND MULCHING SHALL BE INSTALLED INSIDE THE ENTIRE LIMITS OF GRADING EXCLUDING ROADWAY SURFACES, SIDEWALK AREAS AND RIP-RAP AREAS.



NOTE: GRADING SHOWN ON THIS SHEET IS FOR INSTALLATION OF BURIED ELECTRIC SERVICE ADJACENT TO FUTURE ROADWAY.



| <p>48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS 811 UTILITY NOTIFICATION CENTER OF COLORADO IT'S THE LAW</p> <p>THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.</p> | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>NO.</th> <th>REVISION</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>REVISED PER COUNTY COMMENTS</td> <td>08-13-19</td> </tr> <tr> <td>2</td> <td>REVISED PER COUNTY COMMENTS</td> <td>1-21-20</td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table> | NO. | REVISION | DATE | 1 | REVISED PER COUNTY COMMENTS | 08-13-19 | 2 | REVISED PER COUNTY COMMENTS | 1-21-20 | | | | | | | | | | <p>REVIEW:</p> <p>PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC</p> <p>MARC. A. WHORTON, COLORADO P.E. #37155 DATE</p> |
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| NO. | REVISION | DATE | | | | | | | | | | | | | | | | | | |
| 1 | REVISED PER COUNTY COMMENTS | 08-13-19 | | | | | | | | | | | | | | | | | | |
| 2 | REVISED PER COUNTY COMMENTS | 1-21-20 | | | | | | | | | | | | | | | | | | |
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REVIEW:

PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC

MARC. A. WHORTON, COLORADO P.E. #37155 DATE

CLASSIC CONSULTINGSM

619 N. Cascade Avenue, Suite 200 (719) 785-0790
Colorado Springs, Colorado 80903 (719) 785-0799 (fax)

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|---|-----|--------------|-----------------|
| RETREAT AT TIMBERIDGE FILING NO. 1 | | | |
| CONSTRUCTION PLANS | | | |
| GRADING & EROSION CONTROL PLAN | | | |
| DESIGNED BY | PRA | SCALE | DATE 04-05-19 |
| DRAWN BY | ESO | (H) 1" = 60' | SHEET 3 OF 35 |
| CHECKED BY | (V) | 1" = N/A | JOB NO. 1185.00 |

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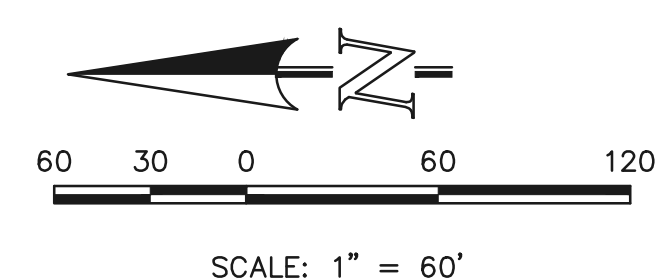
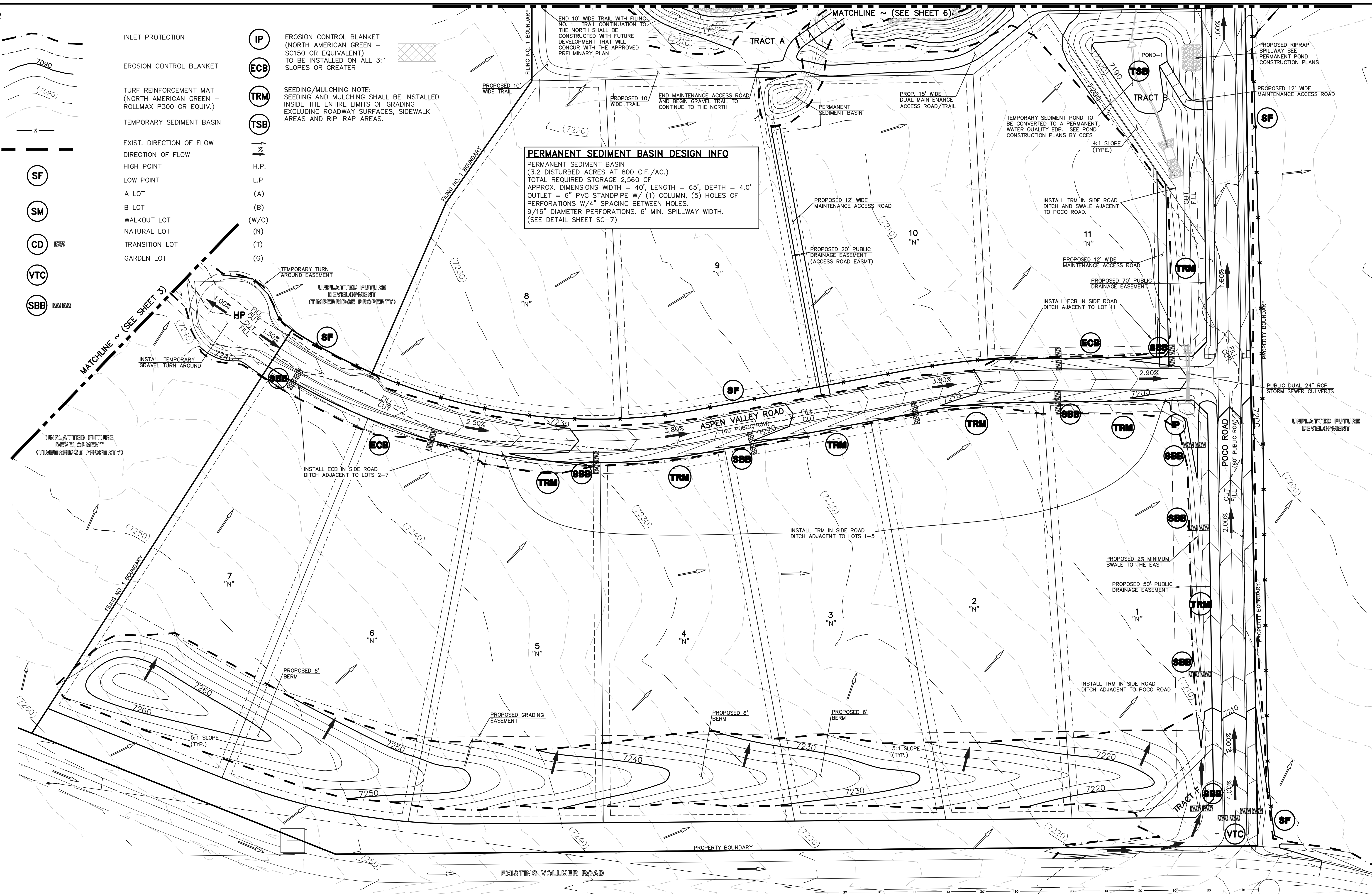
LEGEND

- LIMIT OF GRADING
- CUT/FILL LINE
- PROPOSED CONTOUR-10
- PROPOSED CONTOUR-2
- EXISTING CONTOUR-10
- EXISTING CONTOUR-2
- SILT FENCE
- FEMA FLOODPLAIN
- SILT FENCE
- SEEDING/MULCHING
- ROCK CHECK DAM
- VEHICLE TRACKING CONTROL
- STRAW BALES

- INLET PROTECTION
- EROSION CONTROL BLANKET
- TURF REINFORCEMENT MAT (NORTH AMERICAN GREEN - ROLLMAX P300 OR EQUIV.)
- TEMPORARY SEDIMENT BASIN
- EXIST. DIRECTION OF FLOW
- DIRECTION OF FLOW
- HIGH POINT
- LOW POINT
- A LOT
- B LOT
- WALKOUT LOT
- NATURAL LOT
- TRANSITION LOT
- GARDEN LOT

- EROSION CONTROL BLANKET (NORTH AMERICAN GREEN - SC150 OR EQUIVALENT) TO BE INSTALLED ON ALL 3:1 SLOPES OR GREATER
- SEEDING/MULCHING NOTE: SEEDING AND MULCHING SHALL BE INSTALLED INSIDE THE ENTIRE LIMITS OF GRADING EXCLUDING ROADWAY SURFACES, SIDEWALK AREAS AND RIP-RAP AREAS.

PERMANENT SEDIMENT BASIN DESIGN INFO
 PERMANENT SEDIMENT BASIN
 (3.2 DISTURBED ACRES AT 800 C.F./AC.)
 TOTAL REQUIRED STORAGE 2,560 CF
 APPROX. DIMENSIONS WIDTH = 40', LENGTH = 65', DEPTH = 4.0'
 OUTLET = 6" PVC STANDPIPE W/ (1) COLUMN, (5) HOLES OF PERFORATIONS W/4" SPACING BETWEEN HOLES. 9/16" DIAMETER PERFORATIONS. 6' MIN. SPILLWAY WIDTH. (SEE DETAIL SHEET SC-7)



48 HOURS BEFORE YOU DIG,
 CALL UTILITY LOCATORS
811
 UTILITY NOTIFICATION CENTER OF COLORADO
 IT'S THE LAW

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| NO. | REVISION | DATE |
|-----|-----------------------------|----------|
| 1 | REVISED PER COUNTY COMMENTS | 08-13-19 |
| 2 | REVISED PER COUNTY COMMENTS | 03-05-20 |

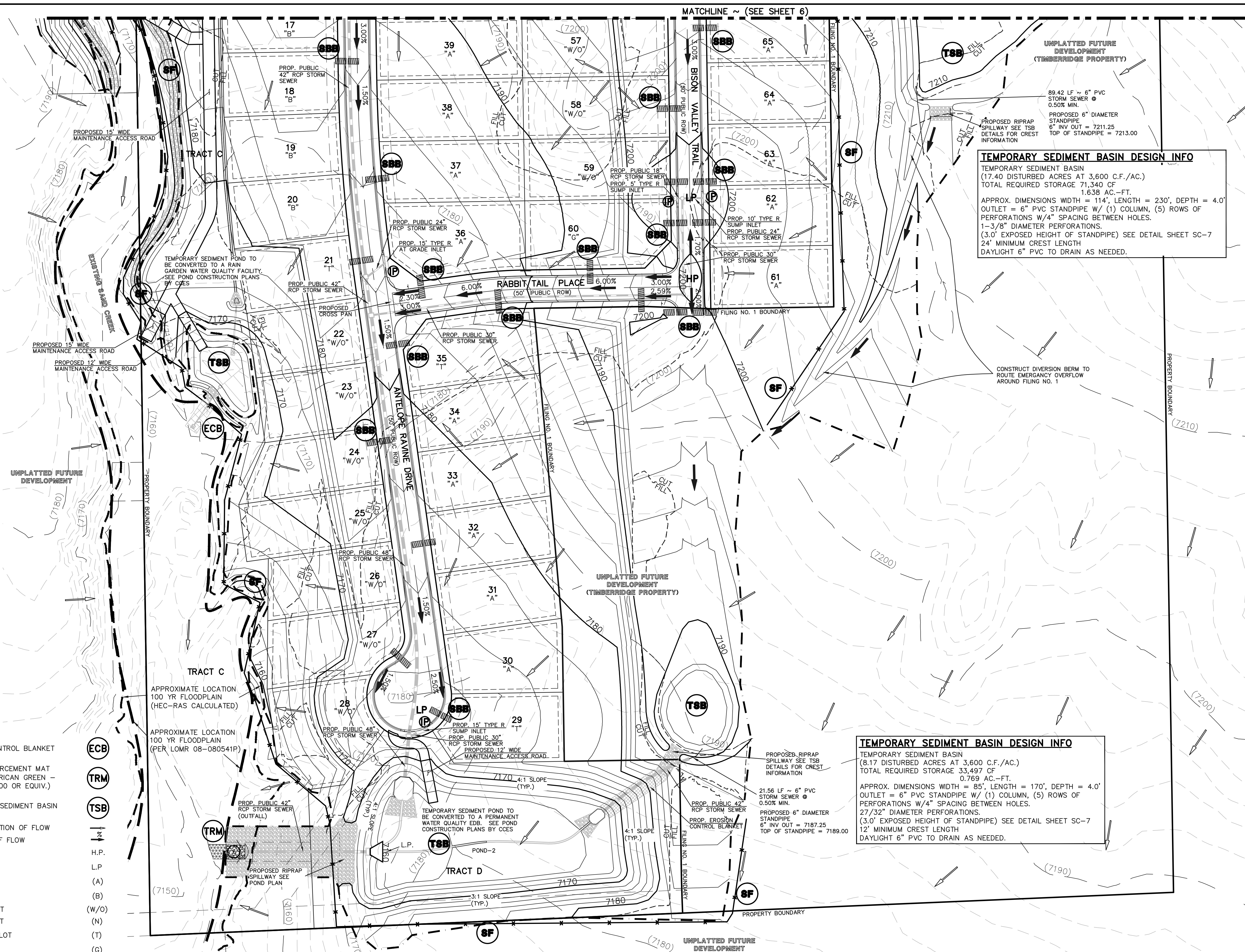
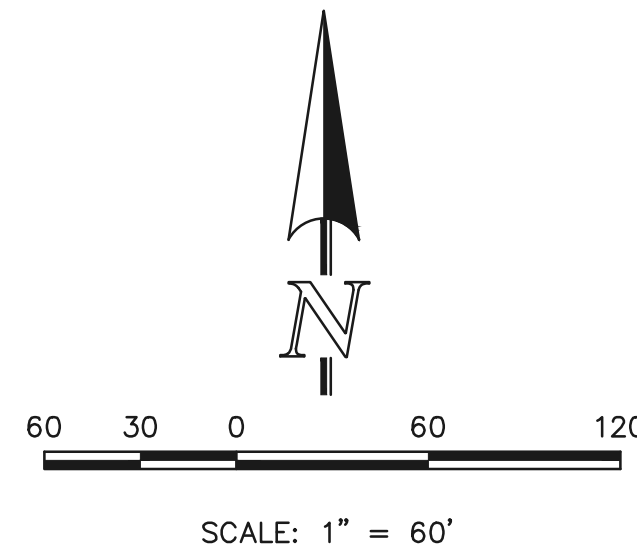
REVIEW:
 PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC

MARC. A. WHORTON, COLORADO P.E. #37155 DATE



RETREAT AT TIMBERIDGE FILING NO. 1
 CONSTRUCTION PLANS
 GRADING & EROSION CONTROL PLAN

| | | | | |
|-------------|--------------|--------------|---------|----------|
| DESIGNED BY | PRA | SCALE | DATE | 04-05-19 |
| DRAWN BY | ESO | (H) 1" = 60' | SHEET | 4 OF 35 |
| CHECKED BY | (V) 1" = N/A | JOB NO. | 1185.00 | |



TEMPORARY SEDIMENT BASIN DESIGN INFO
 TEMPORARY SEDIMENT BASIN
 (17.40 DISTURBED ACRES AT 3,600 C.F./AC.)
 TOTAL REQUIRED STORAGE 71,340 CF
 1.638 AC.-FT.
 APPROX. DIMENSIONS WIDTH = 114', LENGTH = 230', DEPTH = 4.0'
 OUTLET = 6" PVC STANDPIPE W/ (1) COLUMN, (5) ROWS OF PERFORATIONS W/4" SPACING BETWEEN HOLES.
 1-3/8" DIAMETER PERFORATIONS.
 (3.0' EXPOSED HEIGHT OF STANDPIPE) SEE DETAIL SHEET SC-7
 24' MINIMUM CREST LENGTH
 DAYLIGHT 6" PVC TO DRAIN AS NEEDED.

TEMPORARY SEDIMENT BASIN DESIGN INFO
 TEMPORARY SEDIMENT BASIN
 (8.17 DISTURBED ACRES AT 3,600 C.F./AC.)
 TOTAL REQUIRED STORAGE 33,497 CF
 0.769 AC.-FT.
 APPROX. DIMENSIONS WIDTH = 85', LENGTH = 170', DEPTH = 4.0'
 OUTLET = 6" PVC STANDPIPE W/ (1) COLUMN, (5) ROWS OF PERFORATIONS W/4" SPACING BETWEEN HOLES.
 27/32" DIAMETER PERFORATIONS.
 (3.0' EXPOSED HEIGHT OF STANDPIPE) SEE DETAIL SHEET SC-7
 12' MINIMUM CREST LENGTH
 DAYLIGHT 6" PVC TO DRAIN AS NEEDED.

LEGEND

- LIMIT OF GRADING
- CUT/FILL LINE
- PROPOSED CONTOUR-10
- PROPOSED CONTOUR-2
- EXISTING CONTOUR-10
- EXISTING CONTOUR-2
- SILT FENCE
- FEMA FLOODPLAIN
- SILT FENCE
- SEEDING/MULCHING
- ROCK CHECK DAM
- VEHICLE TRACKING CONTROL
- STRAW BALES
- INLET PROTECTION
- EROSION CONTROL BLANKET
- TURF REINFORCEMENT MAT (NORTH AMERICAN GREEN - ROLLMAX P300 OR EQUIV.)
- TEMPORARY SEDIMENT BASIN
- EXIST. DIRECTION OF FLOW
- DIRECTION OF FLOW
- HIGH POINT
- LOW POINT
- A LOT (A)
- B LOT (B)
- WALKOUT LOT (W/O)
- NATURAL LOT (N)
- TRANSITION LOT (T)
- GARDEN LOT (G)
- EROSION CONTROL BLANKET (NORTH AMERICAN GREEN - SC150 OR EQUIVALENT) TO BE INSTALLED ON ALL 3:1 SLOPES OR GREATER
- SEEDING/MULCHING NOTE: SEEDING AND MULCHING SHALL BE INSTALLED INSIDE LIMITS OF GRADING EXCLUDING ROADWAY SURFACES, SIDEWALK AREAS AND RIP-RAP AREAS.

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| NO. | REVISION | DATE |
|-----|-----------------------------|----------|
| 1 | REVISED PER COUNTY COMMENTS | 08-13-19 |
| 2 | REVISED PER COUNTY COMMENTS | 1-21-20 |

REVIEW:
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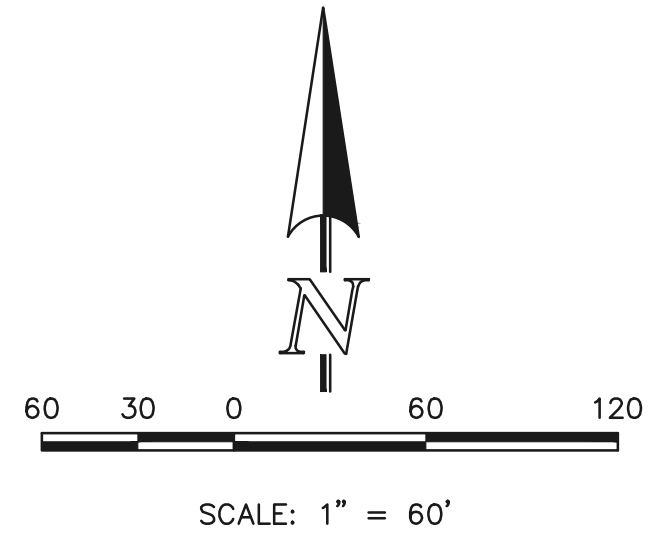
MARC A. WHORTON, COLORADO P.E. #37155 DATE



RETREAT AT TIMBERIDGE FILING NO. 1
 CONSTRUCTION PLANS
 GRADING & EROSION CONTROL PLAN

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| DESIGNED BY | PRA | SCALE | DATE | 04-05-19 |
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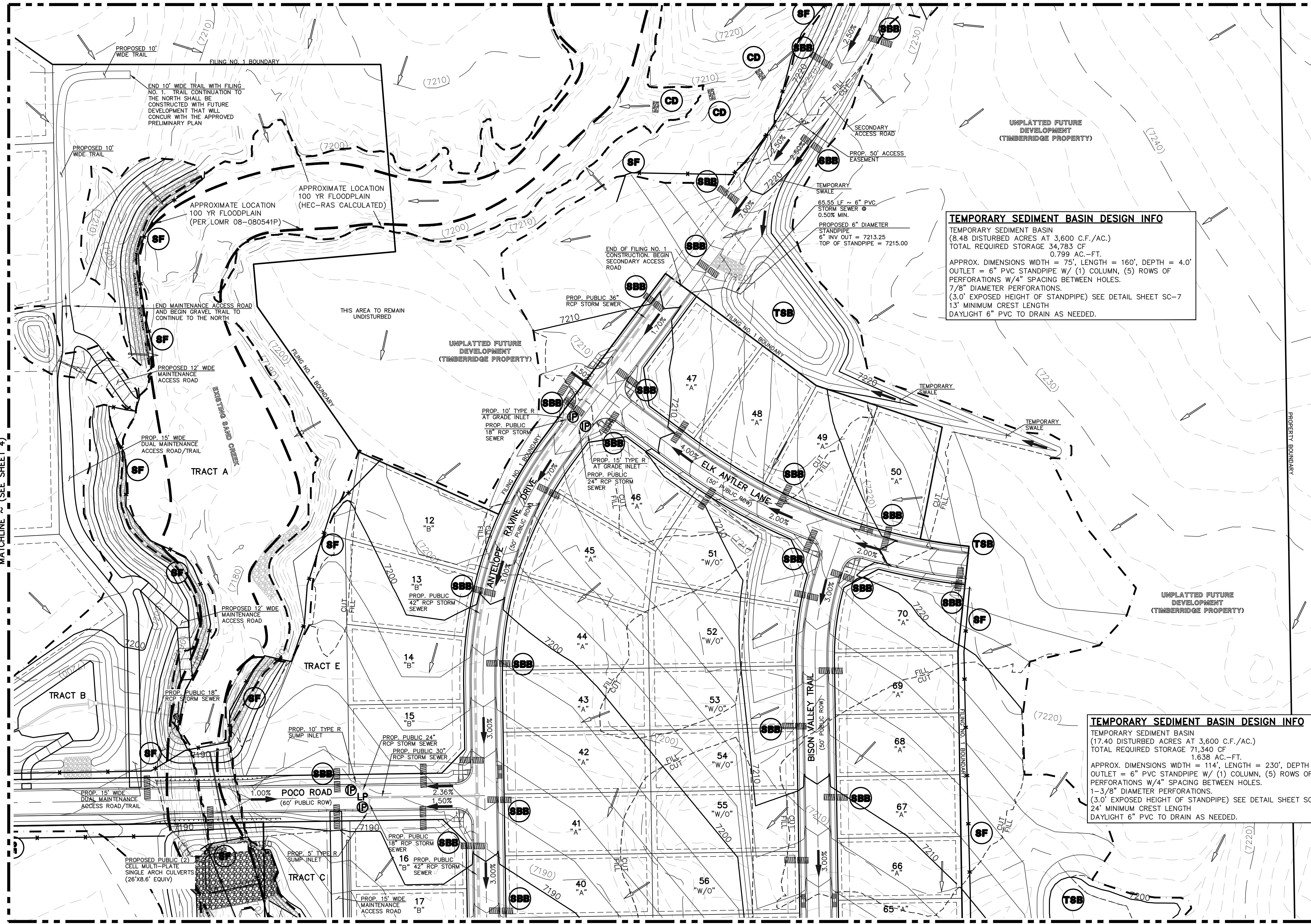
MATCHLINE ~ (SEE SHEET 7)



LEGEND

- LIMIT OF GRADING
- CUT/FILL LINE
- PROPOSED CONTOUR-10
- PROPOSED CONTOUR-2
- EXISTING CONTOUR-10
- EXISTING CONTOUR-2
- SILT FENCE
- FEMA FLOODPLAIN
- SILT FENCE
- SEEDING/MULCHING
- ROCK CHECK DAM
- VEHICLE TRACKING CONTROL
- STRAW BALES
- INLET PROTECTION
- EROSION CONTROL BLANKET
- TURF REINFORCEMENT MAT (NORTH AMERICAN GREEN - ROLLMAX P300 OR EQUIV.)
- TEMPORARY SEDIMENT BASIN
- EXIST. DIRECTION OF FLOW
- DIRECTION OF FLOW
- HIGH POINT
- LOW POINT
- A LOT
- B LOT
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- NATURAL LOT
- TRANSITION LOT
- GARDEN LOT
- EROSION CONTROL BLANKET (NORTH AMERICAN GREEN - SC150 OR EQUIVALENT) TO BE INSTALLED ON ALL 3:1 SLOPES OR GREATER

MATCHLINE ~ (SEE SHEET 4)



TEMPORARY SEDIMENT BASIN DESIGN INFO
 TEMPORARY SEDIMENT BASIN
 (8.48 DISTURBED ACRES AT 3,600 C.F./AC.)
 TOTAL REQUIRED STORAGE 34,783 CF
 0.793 AC.-FT.
 APPROX. DIMENSIONS WIDTH = 75', LENGTH = 160', DEPTH = 4.0'
 OUTLET = 6" PVC STANDPIPE W/ (1) COLUMN, (5) ROWS OF PERFORATIONS W/4" SPACING BETWEEN HOLES.
 7/8" DIAMETER PERFORATIONS.
 (3.0' EXPOSED HEIGHT OF STANDPIPE) SEE DETAIL SHEET SC-7
 13' MINIMUM CREST LENGTH
 DAYLIGHT 6" PVC TO DRAIN AS NEEDED.

TEMPORARY SEDIMENT BASIN DESIGN INFO
 TEMPORARY SEDIMENT BASIN
 (17.40 DISTURBED ACRES AT 3,600 C.F./AC.)
 TOTAL REQUIRED STORAGE 71,340 CF
 1.638 AC.-FT.
 APPROX. DIMENSIONS WIDTH = 114', LENGTH = 230', DEPTH = 4.0'
 OUTLET = 6" PVC STANDPIPE W/ (1) COLUMN, (5) ROWS OF PERFORATIONS W/4" SPACING BETWEEN HOLES.
 1-3/8" DIAMETER PERFORATIONS.
 (3.0' EXPOSED HEIGHT OF STANDPIPE) SEE DETAIL SHEET SC-7
 24' MINIMUM CREST LENGTH
 DAYLIGHT 6" PVC TO DRAIN AS NEEDED.

MATCHLINE ~ (SEE SHEET 5)

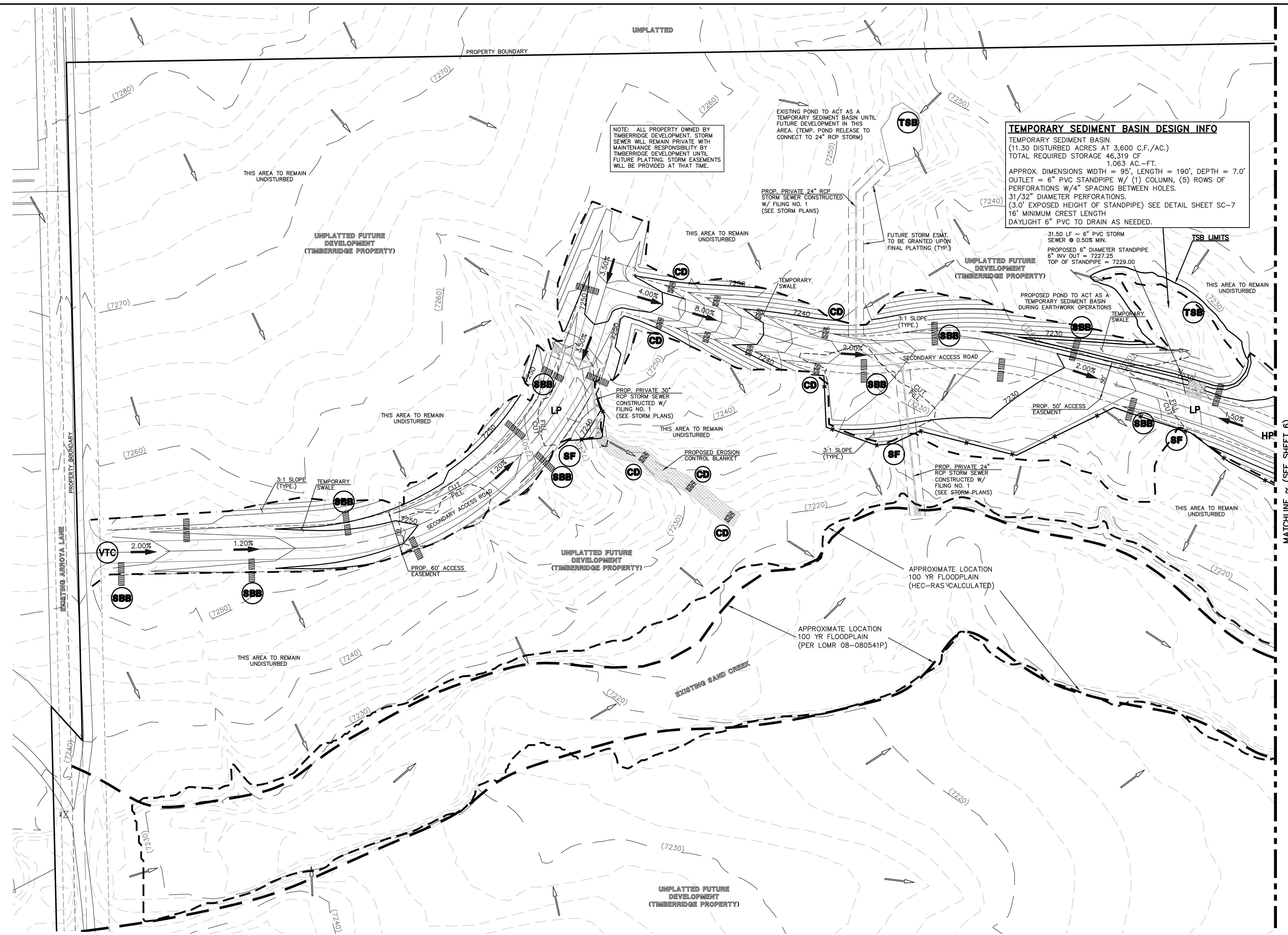
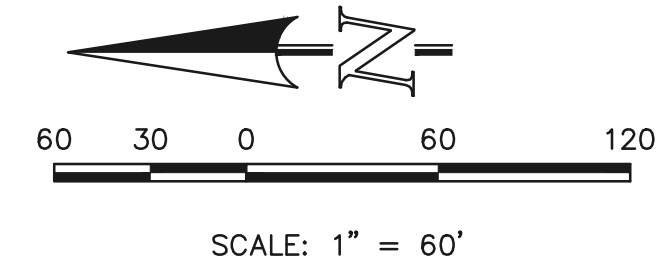
| <p style="text-align: center;">48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS</p> <p style="text-align: center;">811</p> <p style="text-align: center;">UTILITY NOTIFICATION CENTER OF COLORADO IT'S THE LAW</p> <p style="font-size: small;">THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.</p> | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>NO.</th> <th>REVISION</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>REVISED PER COUNTY COMMENTS</td> <td>08-12-19</td> </tr> <tr> <td>2</td> <td>REVISED PER COUNTY COMMENTS</td> <td>1-21-20</td> </tr> </tbody> </table> | NO. | REVISION | DATE | 1 | REVISED PER COUNTY COMMENTS | 08-12-19 | 2 | REVISED PER COUNTY COMMENTS | 1-21-20 | <p>REVIEW:</p> <p>PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC</p> <p>MARC. A. WHORTON, COLORADO P.E. #37155 DATE</p> | <p>CLASSIC CONSULTING</p> | <p>RETREAT AT TIMBERIDGE FILING NO. 1 CONSTRUCTION PLANS GRADING & EROSION CONTROL PLAN</p> |
|---|--|--|----------|------|---|-----------------------------|----------|---|-----------------------------|---------|---|----------------------------------|---|
| NO. | REVISION | DATE | | | | | | | | | | | |
| 1 | REVISED PER COUNTY COMMENTS | 08-12-19 | | | | | | | | | | | |
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| SEEDING/MULCHING NOTE: SEEDING AND MULCHING SHALL BE INSTALLED INSIDE LIMITS OF GRADING EXCLUDING ROADWAY SURFACES, SIDEWALK AREAS AND RIP-RAP AREAS. | DESIGNED BY: PRA SCALE: DATE: 04-05-19 DRAWN BY: ESO (H) 1" = 60' SHEET 6 OF 35 CHECKED BY: (V) 1" = N/A JOB NO. 1185.00 | 618 N. Cascade Avenue, Suite 200 (719) 785-0790 Colorado Springs, Colorado 80903 (719) 785-0799 (fax) | | | | | | | | | | | |

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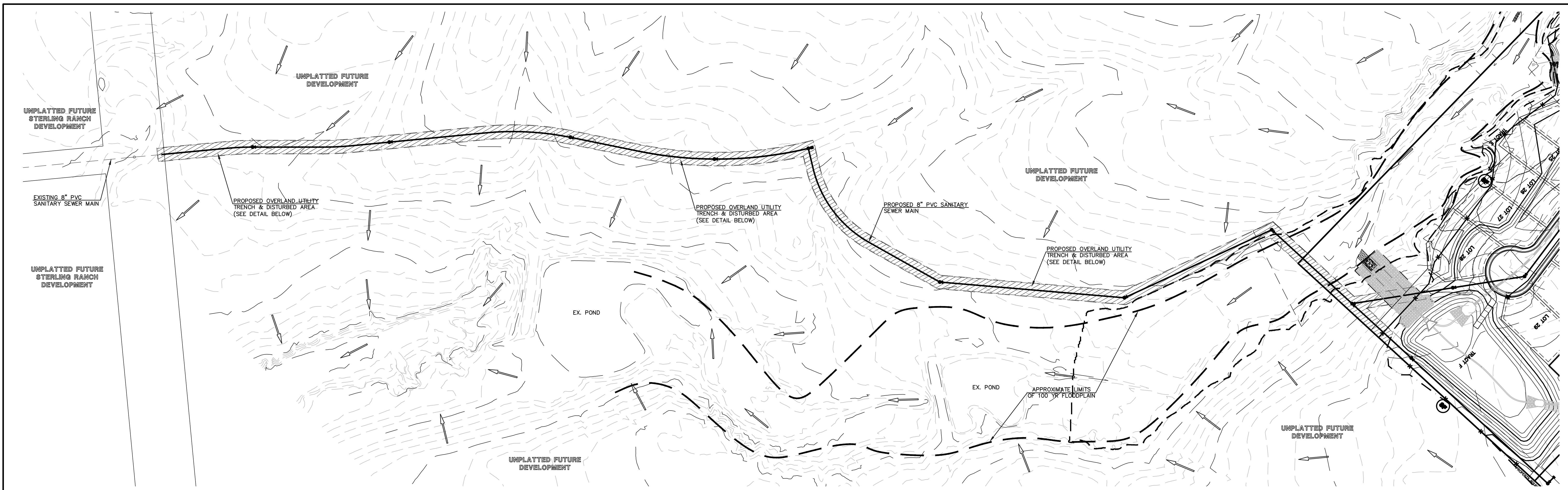
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SEEDING/MULCHING NOTE:
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|---|--|-------------|----------|----------|---|-----------------------------|----------|---|-----------------------------|---------|---|----------------------------------|---|-------------|-----|-------|------|----------|----------|-----|-------------|-------|---------|------------|-------------|---------|---------|--|
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| DRAWN BY | ESO | (H) 1"= 60' | SHEET | 7 OF 35 | | | | | | | | | | | | | | | | | | | | | | | | |
| CHECKED BY | (V) 1"= N/A | JOB NO. | 1185.00 | | | | | | | | | | | | | | | | | | | | | | | | | |

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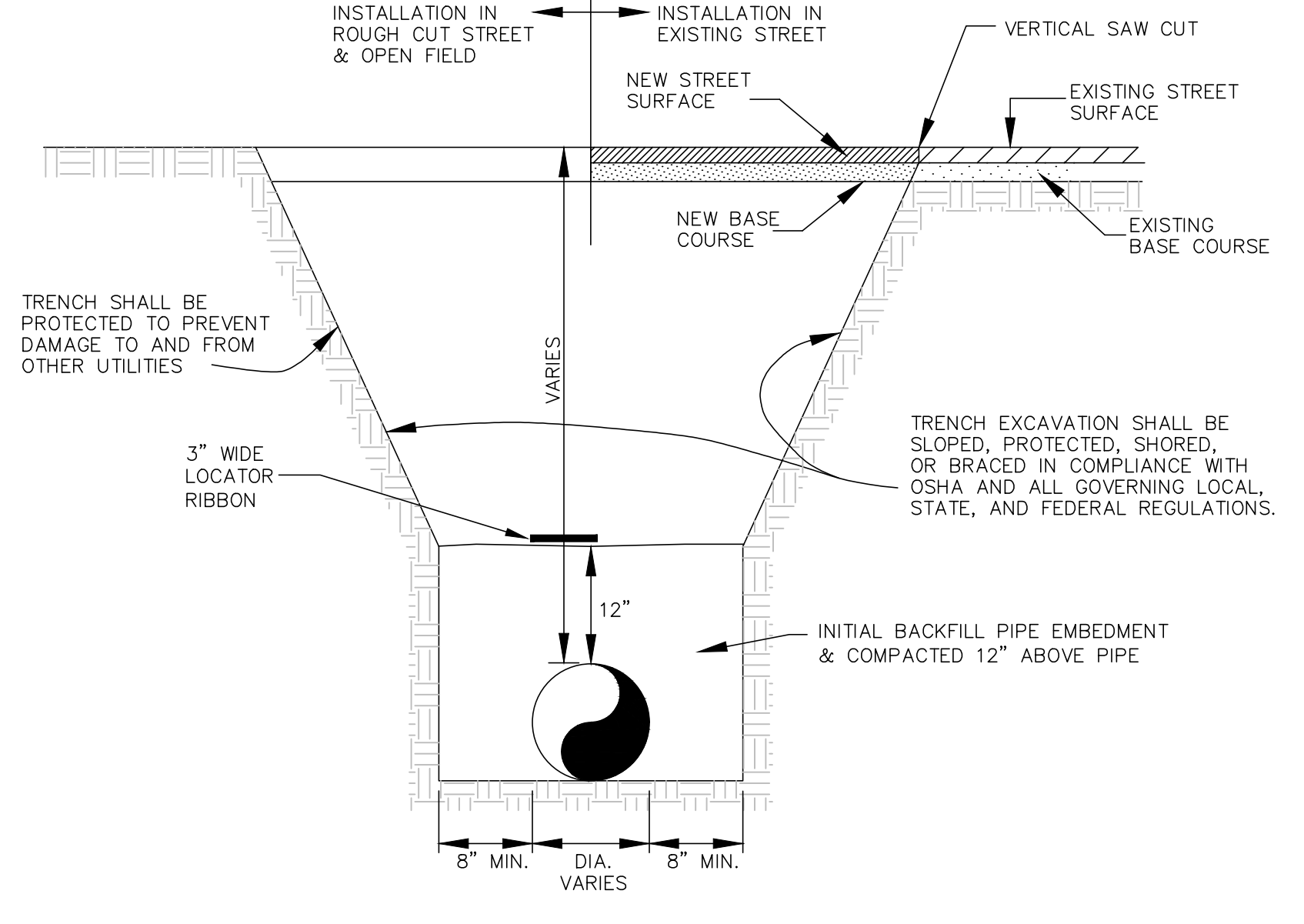


LEGEND

- LIMIT OF GRADING
- PROPOSED CONTOUR-10
- PROPOSED CONTOUR-2
- EXISTING CONTOUR-10
- EXISTING CONTOUR-2
- SILT FENCE
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- LOW POINT

EROSION CONTROL BLANKET (NORTH AMERICAN GREEN - SC150 OR EQUIVALENT) TO BE INSTALLED ON ALL 3:1 SLOPES OR GREATER

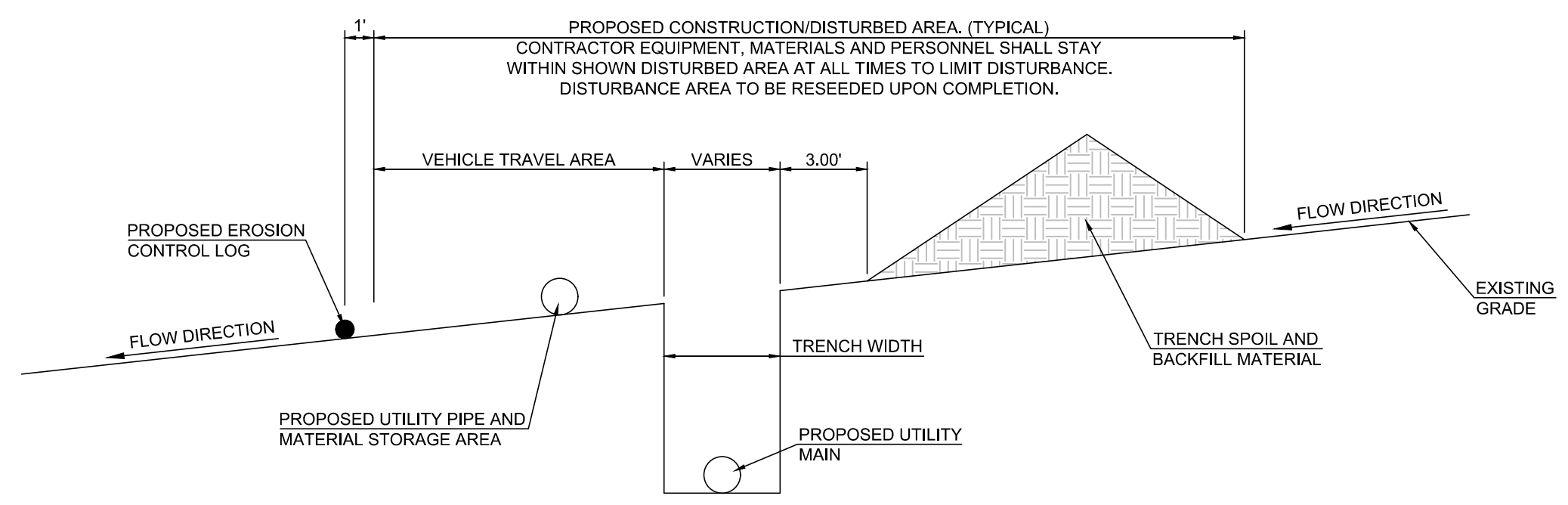
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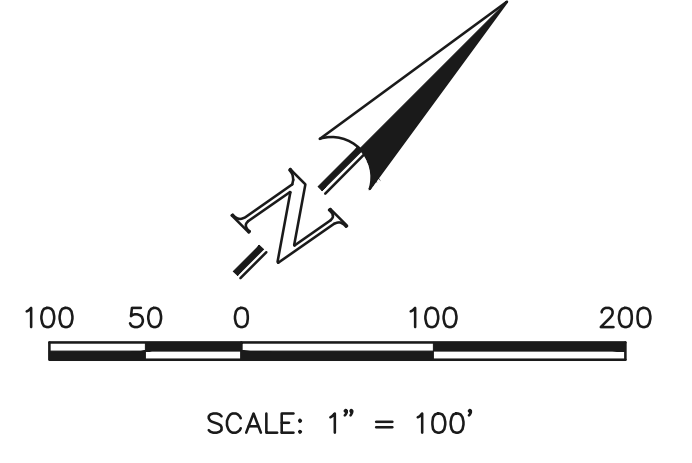
| BOTTOM OF TRENCH WIDTH | |
|------------------------|---------------|
| PIPE DIAMETER | MINIMUM WIDTH |
| 6" | 24" |
| 12" | 30" |

AN OVER EXCAVATED TRENCH SHALL BE FILLED AND THOROUGHLY COMPACTED
 UNDER NO CIRCUMSTANCES WILL PIPE BE LAID IN A PROPOSED FILL AREA PRIOR TO IT BEING COMPLETELY FILLED. THE FILL WILL BE PLACED AND COMPACTED TO PROPOSED GRADE OF THE PIPE.

TYPICAL TRENCH CROSS SECTION



TYPICAL OVERLAND UTILITY TRENCH & DISTURBED AREA DETAIL



| | | |
|--|--|-----------------------------|
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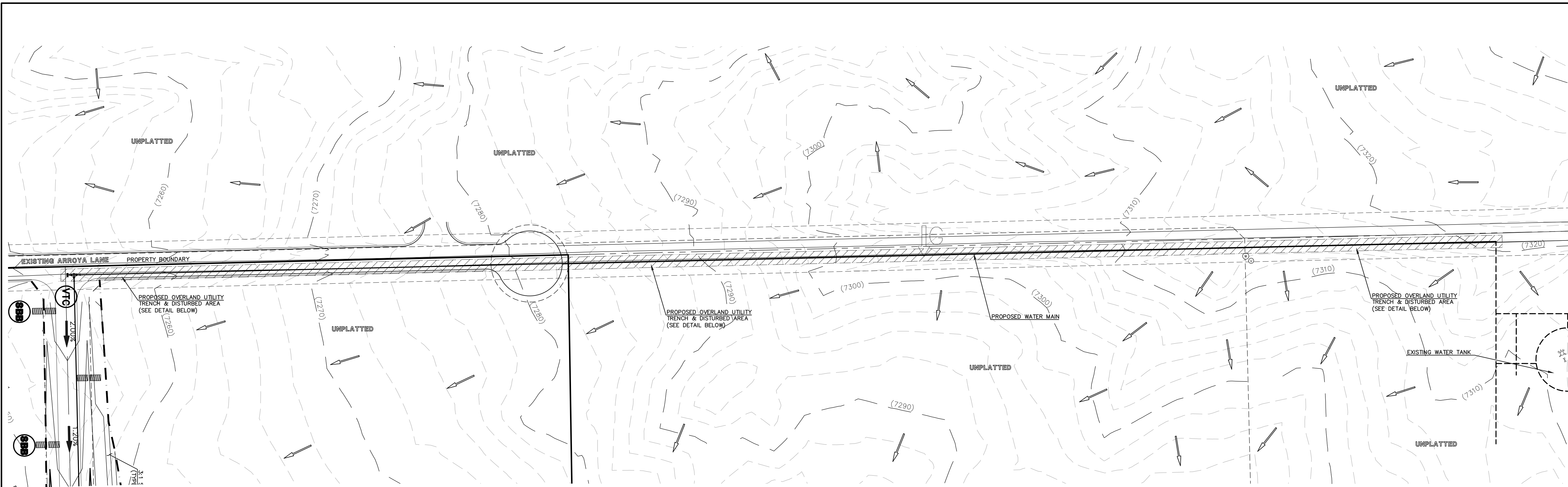
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MARC. A. WHORTON, COLORADO P.E. #37155 DATE

619 N. Cascade Avenue, Suite 200
 Colorado Springs, Colorado 80903
 (719) 785-0790
 (719) 785-0799 (fax)

| | | | |
|--|--------------|---------------|---------------|
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| DESIGNED BY | PRA | SCALE | DATE 04-05-19 |
| DRAWN BY | ESO | (H) 1" = 100' | SHEET 8 OF 35 |
| CHECKED BY | (V) 1" = N/A | JOB NO. | 1185.00 |

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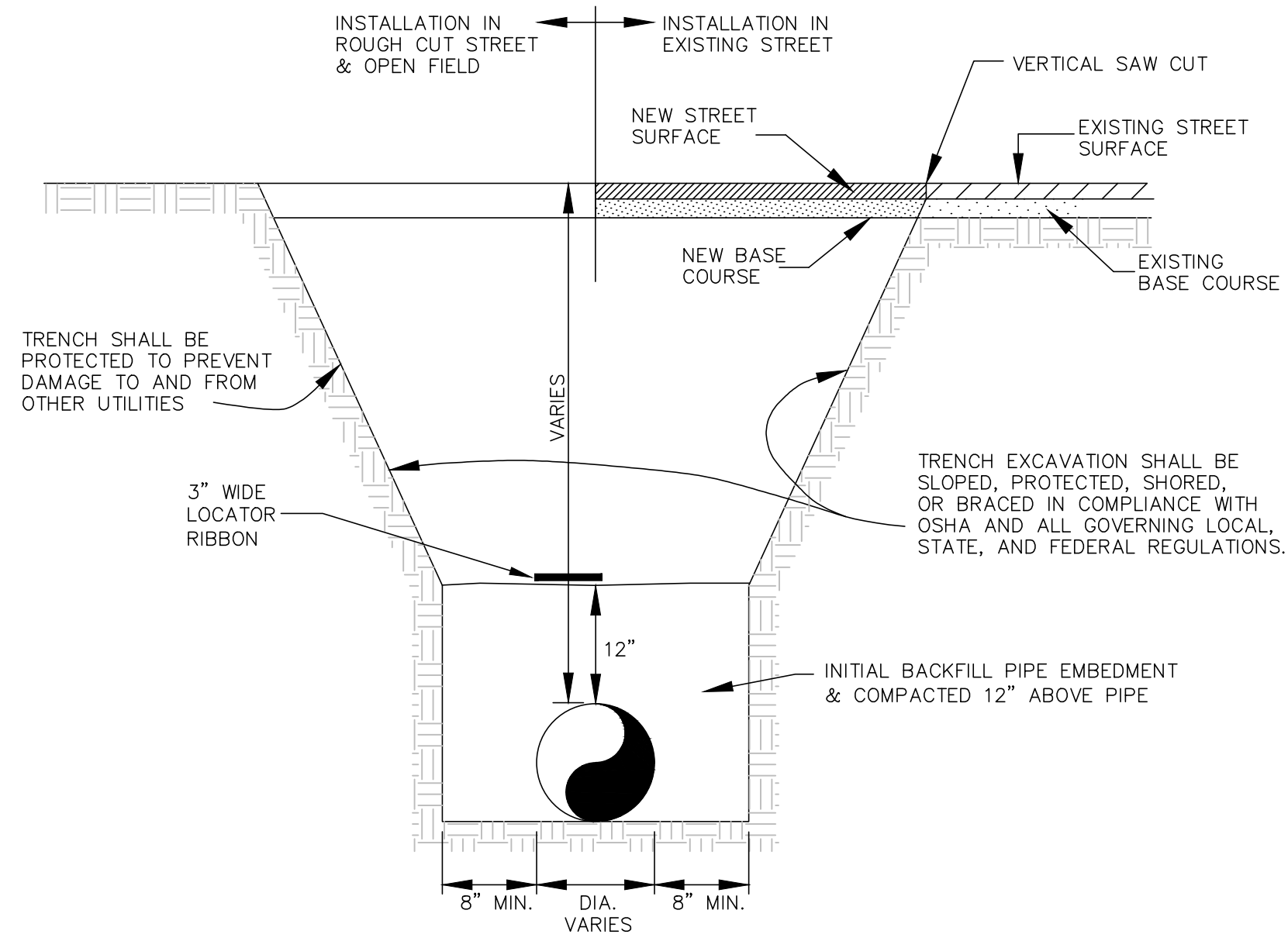


LEGEND

- LIMIT OF GRADING
- PROPOSED CONTOUR-10
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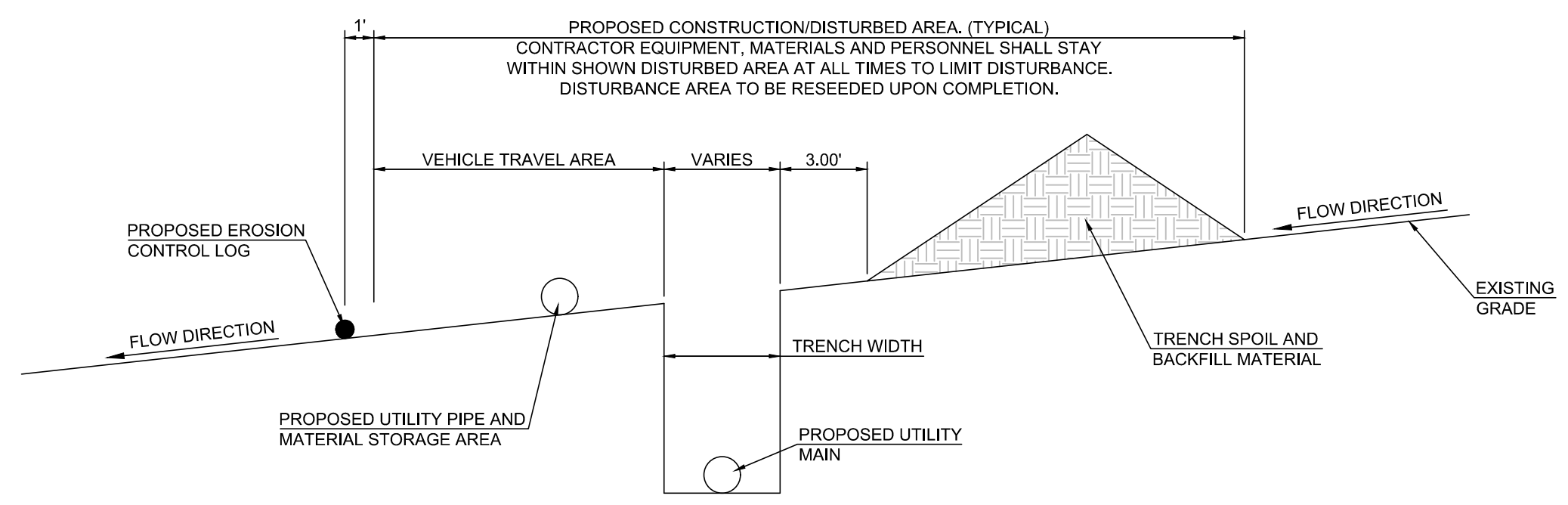
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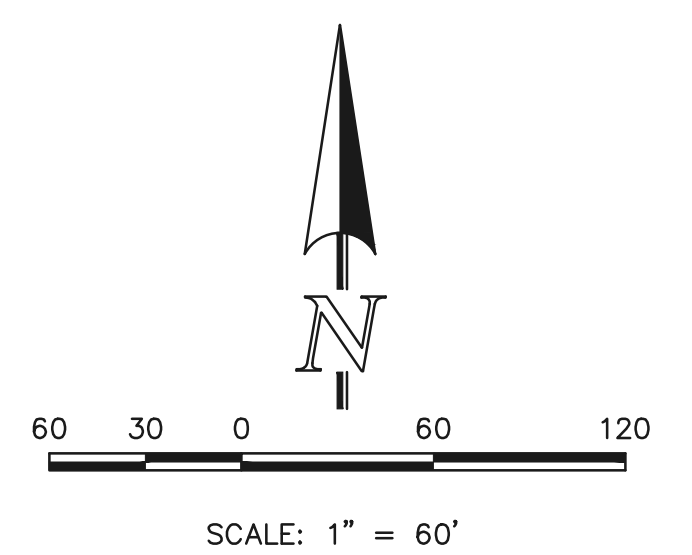
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| 12" | 30" |

AN OVER EXCAVATED TRENCH SHALL BE REFILLED AND THOROUGHLY COMPACTED
 UNDER NO CIRCUMSTANCES WILL PIPE BE LAID IN A PROPOSED FILL AREA PRIOR TO IT BEING COMPLETELY FILLED. THE FILL WILL BE PLACED AND COMPACTED TO PROPOSED GRADE OF THE PIPE.

TYPICAL TRENCH CROSS SECTION



TYPICAL OVERLAND UTILITY TRENCH & DISTURBED AREA DETAIL



| | | | |
|---|-------------------------------|----------|---|
| <p>48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS 811 UTILITY NOTIFICATION CENTER OF COLORADO IT'S THE LAW</p> <p>THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.</p> | NO. REVISION | DATE | REVIEW: |
| | 1 REVISED PER COUNTY COMMENTS | 08-13-19 | PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC |
| | | | MARC. A. WHORTON, COLORADO P.E. #37155 DATE |

REVIEW: PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC

MARC. A. WHORTON, COLORADO P.E. #37155 DATE

| | | | |
|---|-----|--------------|-----------------|
| RETREAT AT TIMBERIDGE FILING NO. 1 | | | |
| CONSTRUCTION PLANS | | | |
| GRADING & EROSION CONTROL PLAN | | | |
| DESIGNED BY | PRA | SCALE | DATE 04-05-19 |
| DRAWN BY | ESO | (H) 1" = 60' | SHEET 9 OF 35 |
| CHECKED BY | | (V) 1" = N/A | JOB NO. 1185.00 |

N:\118500\DRAWINGS\CONSTRUCTION\118500-05-08 WATER TRENCH.dwg, 4/16/2020 10:54:18 AM, 1:1